

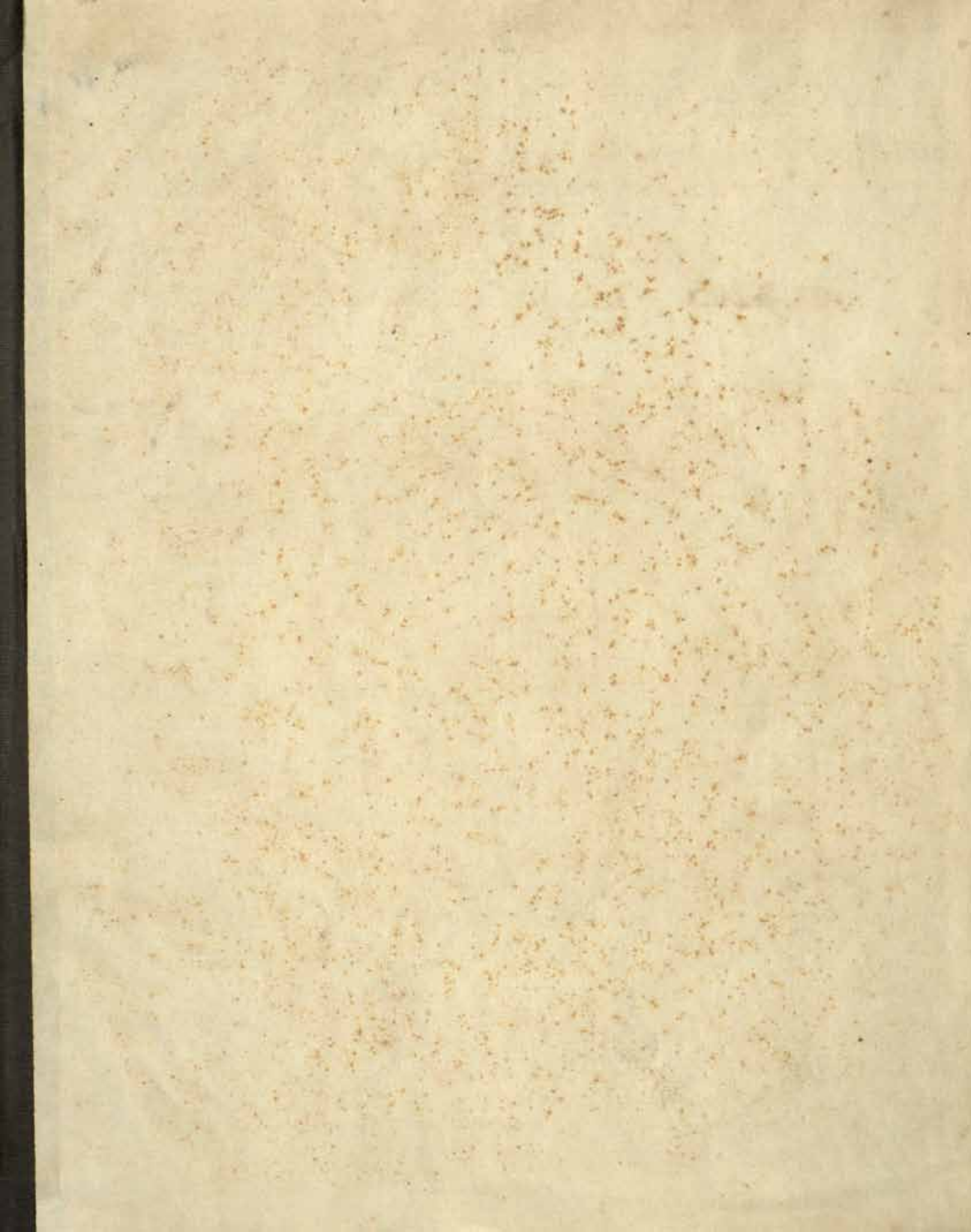
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THE JOURNAL
OF
EGYPTIAN ARCHAEOLOGY



26516

VOLUME VII

913.3205
—
J. E. A.

PUBLISHED BY
THE EGYPT EXPLORATION SOCIETY
13 TAVISTOCK SQUARE, W.C. 1

LONDON

1921

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THE DAUGHTERS OF AKHENATEN.

MURAL PAINTINGS IN THE CITY OF AKHETATEN

By N. DE GARIS DAVIES, M.A.

WHEN Professor Petrie, in his prolific season 1891-2, laid bare the painted pavement of the palace at Et-Till (the sad fate of which has added another count to the indictment of a supine Department of State) and with his genius for such processes bewitched a film of painted surface from the wall of the private room of a magnate of Akhetaten, placed the delicate fabric between rough boards, and sent it to Oxford in safety, he made all lovers of art his heavy debtors.

In the tomb reliefs of El-Amarna, in the statuary of the boundary stelae, and on commemorative tablets, we have many a presentation of King Akhenaten and his family. But sculpture and painting differ vastly, and the material in which most of the tomb-scenes are carried out is a sorry mirror from which to reflect Beauty's face. The mud-plastered, lime-washed surface of brick walls invited a more delicate presentation, and the Providence which watches over children and abandons kings to their unhappy fates, left the two naked babies of the royal pair playing innocently on their cushions when doom fell on the short-lived city. Thanks to Petrie, they caress each other still in the quiet of the Egyptian gallery of the Ashmolean Museum; surely one of the very prettiest relics that the wide pre-Christian world has bequeathed to us.

That season's harvest was so rich that a discovery to which a monograph might well have been devoted is commemorated by a couple of pages and a film from a Brownie camera in the memoir of the season's work¹. It is high time that something more was done for it, though even now I propose to leave a proper appreciation of its place in the history of Art to more competent hands. Pl. I will, I hope, do a measure of justice to the unknown artist of Akhetaten and add largely to the number of those who cherish the memory of the fragment². Akhenaten has been called "the first individual in history." Superlatives are generally untrue; he might with as much truth—that is to say, with not a little—be marked as the first man to love babies. Ancient artists never ventured really to represent infants—the short episode of babyhood was over before they seized its salient softness—but perhaps this man came nearer to it than any other. Obviously Akhenaten had not only required the attempt from the artist, but had inspired him with a real wish to go as far back as he dared into the tender time of babyhood.

What I wish to do here is to call attention to the unpublished parts of the picture and shew this charming fragment in its relation to the whole. It will surprise many to hear that more of the scene exists than is recorded in Prof. Petrie's photograph, although he alludes to it in the text—not without one serious oversight. He speaks there (p. 15) of small figures of attendants being visible between those of the king and queen. But it is obvious from their privileged position and small size that they can be no other than the

¹ PETRIE, *Tell el Amarna*, Pl. I and pp. 15, 23.

² Traced from the original by the kind permission of the keeper of the Ashmolean, and painted under exceptionally favourable conditions by my wife.

three elder princesses. As a matter of fact their happy discoverer had the best proof of it in his own keeping. Amongst the rich, if fragmentary, rewards he brought away with him from El-Amarna, were many fallen fragments of this and similar scenes, the exact provenance of which is no longer in his memory or in accessible notes¹. Had other houses than that in which this jetsam was found yielded even sparse material of this sort, he would scarcely have failed to notice such further instances of the custom of placing mural paintings of the royal family in the secular as well as the final residences of the rich. These fragments also, therefore, almost certainly come from house 13² or from the only other locality from which mural paintings are reported, the harem (?) of the palace itself. In the latter case the dado only was preserved and shewed servants busy about the palace. No doubt a picture of the building itself formed the main scene above and included the royal family and court³. Fragments 14, 15, 16, 19 may have come from this or a similar source; mention of them is scarcely to be looked for in Prof. Petrie's succinct account of his work. It is clear from his words that more than one wall of house 13 had received such decoration, but we shall properly try to insert as many of the surviving fragments as we can in the one picture whose subject and arrangement are known to us⁴.

Among these relics are parts of the bodies of nude girls whose interlaced figures, characteristic chins, and lax attitudes comport excellently with a group of children lolling against their mother's knee, such as our picture demands⁵. Pl. II shews, I think, that the fragments fit well enough on to the limbs left in the existing painting. I had in fact arranged them thus before it occurred to me that they probably belonged to the Ashmolean picture; for the body, being embraced on both sides by the arms of others, is decisively shewn to be the central figure of a group of three. The fragments are so broken and incomplete that the exact relation of the figures can never be recovered with certainty, still less their original proportions and outline; but it is possible to assert that the three elder children also made a very attractive group, and to find in it evidences of the power and delicacy of the ancient brush-work, and a sense of the beauty of the human frame which millennia of rigid tradition had not destroyed⁶. Nude children were given a little of the animals' privilege of exemption from the severer rules of propriety.

Owing to its fragmentary state, a description of the scene is called for. Its extent is not ascertainable, though careful estimation might reach some idea of its height and afford a rough minimum of the loftiness, or otherwise, of the ground floor of an Egyptian mansion, a datum of considerable interest⁷. But for this a knowledge of the distance of the picture

¹ I derive this information of course from Prof. Petrie himself, who with his usual accessibility and generosity has not only allowed me to copy and publish the fragments, but has given me all the help and information he could. The pieces are exposed in one of the crowded cases of the Egyptological collection at University College, London.

² PETRIE, *Tell el Amarna*, Pl. XI.

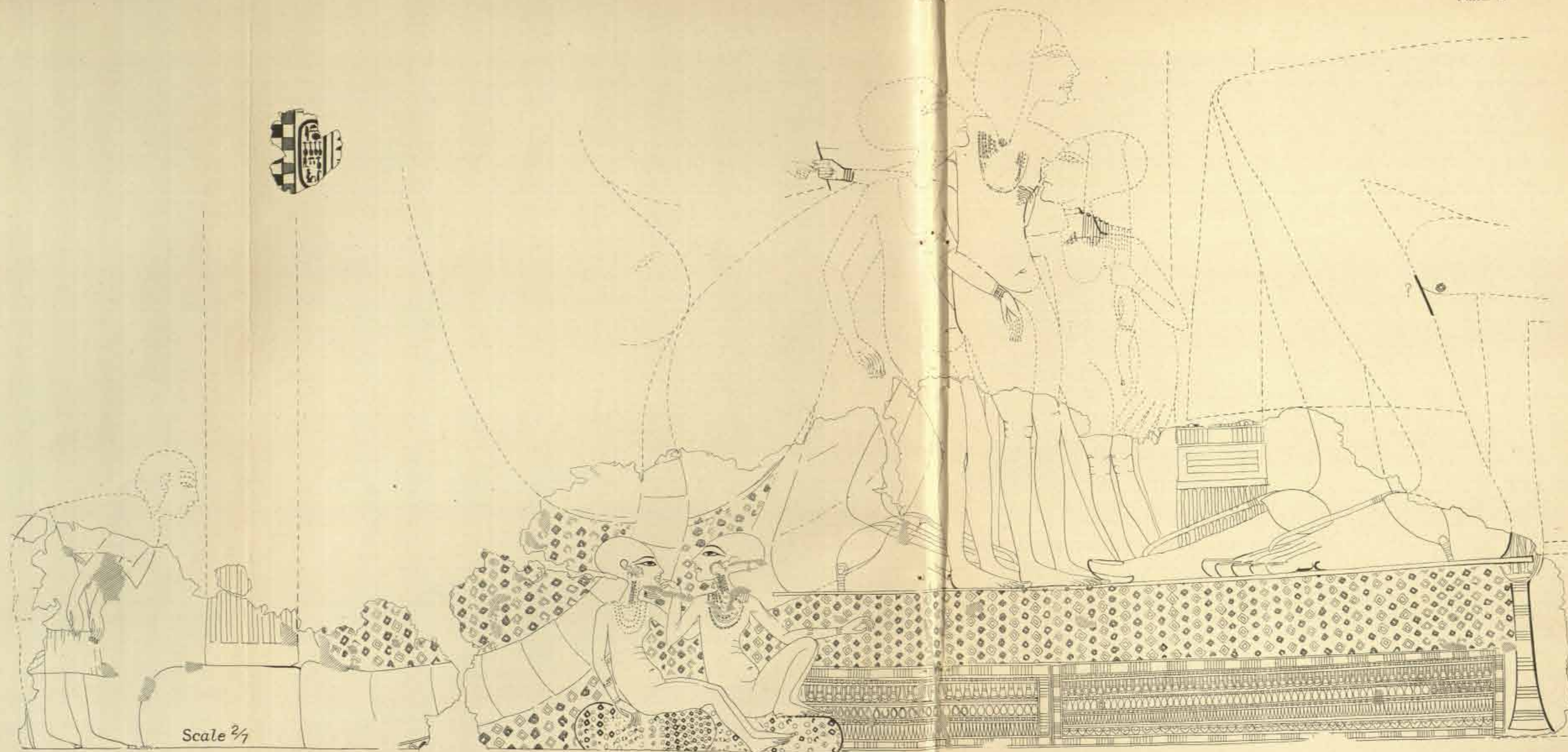
³ Cf. DAVIES, *El Amarna* v, Pl. V.

⁴ Prof. Petrie mentions several subjects as disclosed by fallen fragments, but of these none seem to have been removable, unless it be fragments 31 and 32. *El Amarna* III, Pl. VIII probably affords a replica of the rural scene. For the bowl between kneeling negroes cf. LERS., *Denkm.*, Pt. III, Pl. 118.

⁵ If there were a second similar picture on the opposite wall, the girls in it would probably face the other way. The group is unusually involved in consequence of the restriction of the space, and of the support afforded them by the queen's knee.

⁶ I am only too keenly aware that my clumsy restorations, which aim at no more than a rough indication of the probable grouping and postures, are open to severe criticism. More was not possible in the time at my disposal.

⁷ Cf. *El Amarna* II, Pl. XXXII.



Scale $\frac{2}{7}$

RESTORATION OF THE WALL-PAINTING IN HOUSE 13 AT EL-AMARNA

from the floor (30 inches in the palace, according to Petrie), and of the frieze, if there was one, is needed. The excavations of Borchardt and Peet may be expected to do something, if not much, to meet this need¹.

The scene has place within a pillared erection, but whether the supports are thought of as round or square and as carrying the ceiling or only a light baldachin must be left to students of the town ruins to decide. The former is more likely, as there is no indication of a dais and the columns intrude into the picture itself². The room in which the painting was found appears to be one of a private suite, since both it and the next room (furnished with an inner cubicle and bathroom) are provided with screening walls inside the entrance to shut off the direct view³. This fitting makes the room less adapted for so noble a mural decoration, but the part containing the royal family might still lie in the unencumbered space and be viewed from a proper distance. The wall from which the picture was taken is over fifteen feet long. The royal family occupied little more than five feet, so that, if the picture extended behind the screening wall as well, a large part of it was occupied by the figures of servants. Fragment 26 shews the figures of two nurses (?) approaching the base of a column. It is probable therefore that two columns have been completely lost, one behind the king's stool and perhaps closing the scene in that direction, and a fourth on the left, outside which the nurses and ladies-in-waiting stood. These attendants would be in several registers⁴.

The king sits on a straight-legged stool with cushioned seat⁵. His feet rest on a padded footstool, the lower part of which is encased in a box of richly painted wood. The cushion of red leather (?) extends right over this and the contiguous stool of the queen, the division between the two not being marked, nor even that of the white sandals which both wear. The queen, who faces her husband, reclines comfortably on a thick cushion of like material, whether sitting upright like the youngest princesses or lolling with her shoulder against the column and with her right arm supporting her in that position. I think she must have held the sixth daughter Setepenrê⁶ on her lap⁶; for we have a fragment of a little hand clasping one of her sister's fingers, which I cannot place elsewhere. The queen is dressed in a long white robe, which half covers her feet and forms a

¹ There was no sub-scene in this case. Borchardt has noted the existence of friezes in houses at El-Amarna (*Mitteil. d. D. O. G.*, No. 55, p. 24).

² In pictures of the palace the royal chairs are set between the columns in the middle of the hall (*El Amarna* I, Pls. XVIII, XXV; II, Pl. XIV; VI, Pls. XIX, XXVIII).

³ This is pretty effectual in the case of the bedroom suite, but not in the painted chamber. It appears from *El Amarna* III, Pl. XI that an additional wooden palisade within the screening wall has disappeared. See *El Amarna* III, p. 22.

⁴ It may be that the opposite wall of this same room carried a very similar picture, since portions of the footstools and cushions exist, and that the stout party walls contained pictures of the king leaning from his window to reward faithful servants (fragments 5 and 33). These are the commonest subjects in the tombs, save for pictures of the palace and temple, and it is obvious from this that the hall of the tomb was treated as a dwelling and not as a sepulchre. We learn from the ruins that in the palace of Akhenaten, in that of his father at Thebes, and in this mansion also, even the cupboards were ornamented with pictures of caskets, jars, etc.; so it is likely that the greater part of the house was so treated, walls, floors, and ceilings.

⁵ Cf. *El Amarna* VI, Pl. XVII and SCHÄFER in *Zeitschr. f. äg. Sprache*, LII, 85. These stools are generally of ebony inlaid with ivory, but here of white stuccoed wood with coloured ornamentation.

⁶ So in SCHÄFER, *ibid.*, 77, 78, 85; *El Amarna* III, Pl. XXXIV; VI, Pl. XVII.

background to two of the three girls at her knee. It is tied with a long red sash¹. Her name is written near the column².

The two little princesses, Nefernefruaten the younger (to distinguish her from her mother)³ and Nefrurē⁴, are seated beside one another on cushions placed on the ground at their mother's side. The former, turning towards her still smaller sister, caresses her by lifting her rounded chin as if for a kiss and the baby responds by throwing her arm round the other's neck. Even at their tender age both wear as earrings heavy discs of gold in the shape of a tied ribbon from which four beaded tassels hang. Indeed this seems, like the modern Arab baby's earring, to be a distinctly youthful ornament. Round their necks hang loose strings of fine beadwork, and bracelets are clasped on the wrist and forearm. But they, as well as their elder sisters, are not incommoded with further dress. If we except the elongated skulls, the enormous eyes and lips, and the scraggy neck, which reflect their father's real or magnified deformities, the lines of their profiles and bodies are beautifully rendered. Had this been a fragment discovered in a sale room, it would probably have been set down to a Japanese master of peculiar tendencies. The creases in the soft flesh of the children on neck and body and at the elbow and knee are delicately indicated, as well as the collar-bones and the dimple in the corner of the mouth. A black line adumbrates the opening between the lips; a device to which Ramesside artists fell heirs. We may note too that the vital reform made in the drawing of the foot by the marking of the toes and flattening of the outer arch of the foot was observed in painting also⁵.

It may be said at once however that Prof. Petrie's claim that the artist took the revolutionary step of indicating the high lights by the use of powdered orpiment cannot be justified. This bright yellow dust is, as I have observed in other cases, the result of the degradation of the yellow pigment under the action of damp and has been transferred to the bodies from the adjacent background, where masses of the same bright powder can be seen. Nor is it found by chance consistently where light might fall, but on conflicting sides. Besides, the supposed practice is unthinkable at this era. Light and shade, like foreshortening and other optical departures from the normal aspect, were things which the artist had only to observe with a view to eliminating them as blots upon a picture; his task being to depict, not immediate impressions, but things as recalled in typical form.

The height of the knees in the extant part of the group of the three sisters indicates their comparative size and ages. Mertaten is in the middle, Mektaten on her right and Enkhsenpaten on her left⁶. The last-named wears the side lock, its length being extended by the addition of a fringe of blue tasselled (?) tags⁷.

By the enlargement of the royal family from two to five or six, new light is thrown on the date at which this house (which, as the largest in Akhetaten, one might attribute with

¹ It should probably depend from the bosom rather than from the lap (SCHÄFER, *ibid.*, 78, 85).

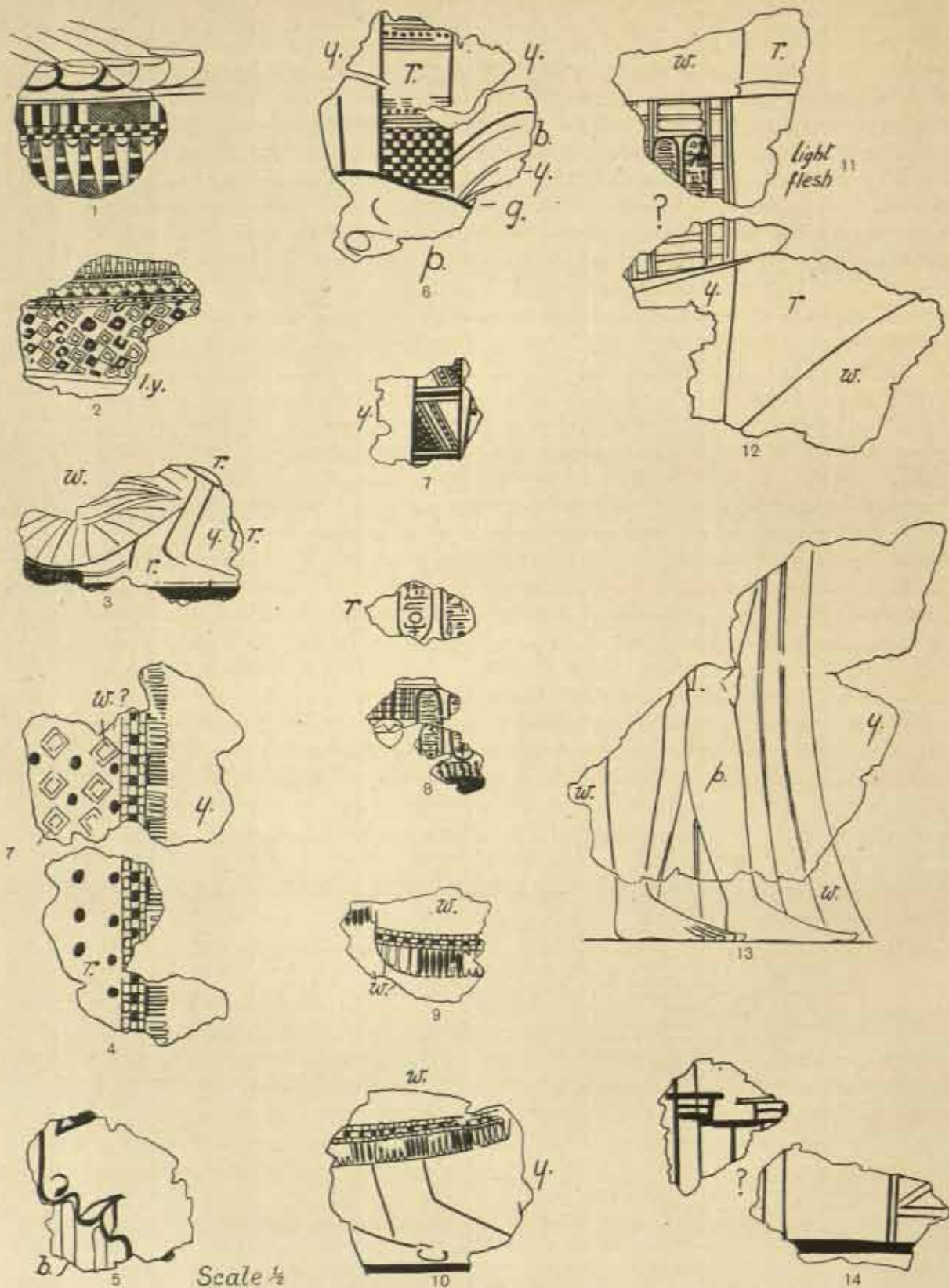
² The fragment would be higher up above her shoulder.

³ We see her as a suckling in the arms of her nurse at the burial of Mektaten (*Mémoires de l'Institut Français*, viii, Pl. IX); for I think that, after all, the name must be hers, however scant the room. Thus Mektaten died about the 13th year of the reign.

⁴ SCHÄFER, *Von Aegyptischer Kunst*, 180.

⁵ The modern reader of the picture must be reminded, in order to visualize the scene, that the three girls are to be thought of as side by side at right angles, or nearly so, to the plane of the picture facing the king.

⁶ Cf. VIREY, *Rehmaru*, Pl. XLI.



FRAGMENTS OF WALL-PAINTINGS FROM EL-AMARNA
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some probability to the high priest Meryrē^c or to Ay) was decorated. It can scarcely be earlier than the fourteenth or fifteenth year of the reign¹. Thus the designers and sculptors of the city were busied for many years with the decoration of the eternal homes of the king's servants in the necropolis and the perpetuation of his memory there, before they had time to devote to the adornment of the private houses even of the richest citizens. Borchardt has shewn that scenes similar to this were regarded as part of the furniture of the better class houses, in the form of little sculptured icons of which many examples have come down to us. They were sometimes set at the top of a little flight of steps as on a daïs and furnished with folding doors to keep them from injury. It should have contributed to the making of happy homes in the capital that the houses held the idolized pictures of this most domesticated of kings dandling his wife and children on his knee or making Mertaten happy with new earrings, and of the no less enamoured queen bringing him flowers to smell, filling his cup, and clasping on his collar for him.

The date suggested for the picture shews that it was a product of the art of Akhetaten when at its zenith—and probably exhibits the high-water mark of Egyptian painting before its swift decline. One sign there is that might militate against the date given. I had supposed that the form of the cartouche of the sun-god in which his name is given as "the light (*shu*) which is in the disc," had given way to a slightly different wording before this². Yet here it is seen several years later than its last appearance in the tombs (fragments 8 and 11).

The extent of the custom of painting the walls of private houses and the nature of the subjects adopted for the purpose may be learnt by the supposition that what is exhibited on tomb walls is derived directly from domestic exemplars. But we need direct evidence from town sites. I make no apology therefore for presenting readers with reproductions of most of the fragments which Prof. Petrie has rescued from Tell el-Amarna and in adding brief notes. All these pieces (Nos. 1 to 33, Pls. III and IV) are on a uniform layer of mud rarely exceeding one-eighth of an inch in thickness, evidently the facing of well built and pointed brick walls. A very thin layer of stucco gives the surface needed for painting. Hence the fragments are extremely fragile and perishable.

(1) Foot of man, facing right, resting on a footstool without cushion (from a companion scene to Pl. II).

(2) Decorative woodwork above a cushion, the mandrakes shewing that this is the right way up. It might be the bottom of Nefertiti's footstool and the top of one daughter's cushion, No. 29 being part of the other and both from the companion scene.

(3) Man at work or asleep, sitting on a black pad.

(4) Fragments of a garment (?) shewing solid blue diamonds alternating with white (?) open ones and bordered with rows of blue, red and blue beads or spots and by red and blue lengths of fringe.

(5) Face of Akhenaten, bending across the pillar of a kiosk; hence from a scene in which he distributes rewards from a window (?). The face is too small for Pl. II.

(6) A female hand of large size holding decorated staff, a sash (?) of blue and green with white edgings, and something else (?). One thinks of insignia of office in the hand of a courtier.

(7) A column with decorations carried out in black on white or light buff.

¹ See *El Amarna* II, 6, 7.

² *El Amarna* II, 7

(8) Cartouches of the Aten, in the earlier form, against a man's skin (that is, bound round the arm on a thread), and hanging in the centre of a collar.

(9, 10) Parts of the white robe of a Syrian of fair complexion, with the usual edging and fringe. The figure may come from the device of United Egypt so often found on balcony panels, or be that of an ambassador at Court.

(11, 12) Arm of Nefertiti with bracelet bearing the cartouches of the sun-god across bars of blue and green inlay on gold.

(13) Lower part of a princess from a bottom register.

(14) Gateway of a temple or palace, with a table (separate pieces?). White against a white ground.

(15) Man approaching a booth supported by columns. These have a white base and are decorated, above the panelling of blue bars against yellow, by blue and yellow drums alternately. Sprays entwine it, and the columns are connected by coloured hangings.

(16) A cook (?) at work in a vaulted chamber with white walls; a table is behind him. (Cf. *Tell el Amarna*, Pl. XI, 9.)

(17) A female (?) attendant carrying a fan (?).

(18) Head of a bowing (?) servant.

(19) Bouquet of three papyrus heads, the stems bound with red and blue ribbons.

(20) Long hair of a lady who wears a brightly coloured cape or collar. Perhaps that of an attendant, but Nefertiti herself sometimes wears her hair hanging¹.

(21) Three fragments of richly decorated capes, such as are worn by royalty especially. The large one on the right is probably the king's in Pl. I; the similar one may be his in another picture, and the third Nefertiti's. The colours are not sharply divided, but tongues of blue are drawn up over the green, and of red over yellow. The topmost row looks like bead work, the yellow mandrakes (?) are probably the known glaze pendants in that form. The material of the plain bands of colour is not evident.

(22) Several fragments obviously go together to form the design of United Egypt, and there is little doubt that it comes from the stool of Akhenaten in Pl. II. The bar of the chair on which this fretwork stands is white, as is also the design, with blue blobs on the stems of the plants of the South (left) and the North (right) and the usual colours on the *sam* sign.

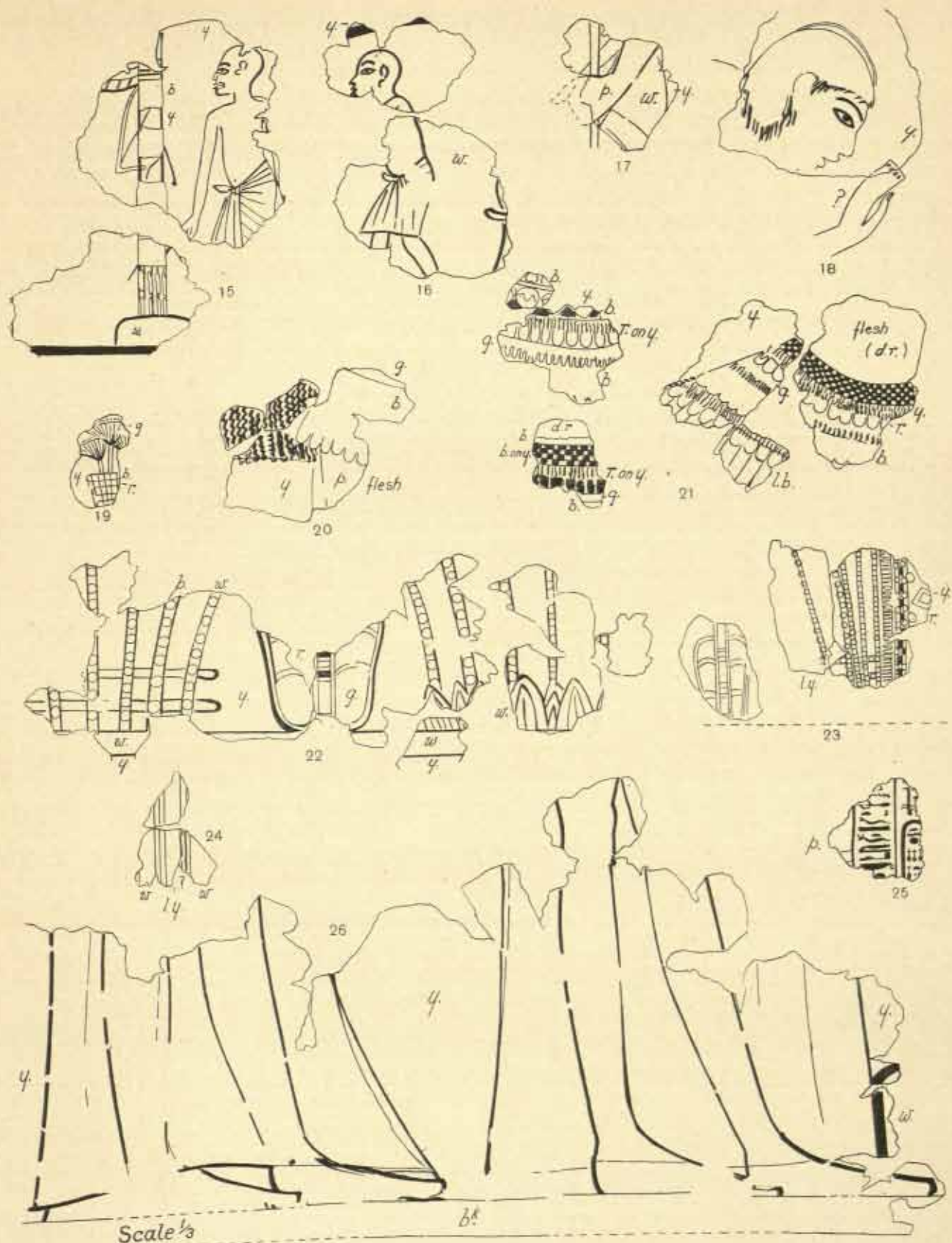
(23) The same design was evidently repeated on a smaller scale in another scene. Six stems of the southern plant grow out of the cultivated land (not, like the papyrus, out of the marshes) and immediately to the right of them is a cloth which, though coloured like the cushions, seems from its position to be the robe of a Syrian captive. If so it extends to his heels, and No. 4 (reversed) would seem to form the other outline of it.

(24) Shews a light buff stripe, separated from a white one by three red lines. If this be the dress of a southern captive, it would form a parallel to the exceptional loincloth of men of Punt in the tomb of Puyemrê at Thebes.

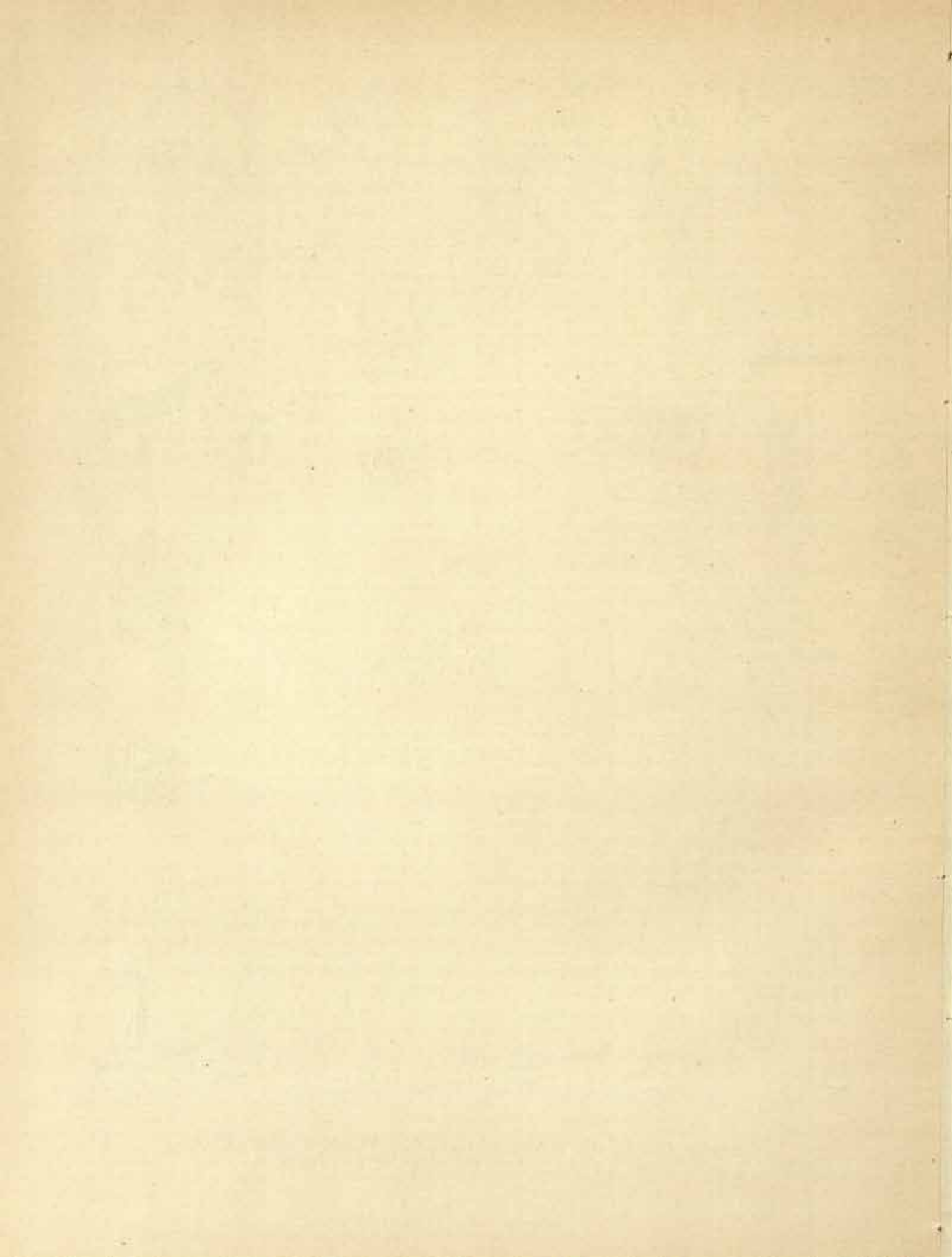
(25) A fragment of the elbow or knee of one of the princesses with the name (in black on yellow) of Mektaten. It might be placed in Pl. II, the arm being that of Mertaten thrown round her sister's neck. But the latter in that picture seems to be Enkhsenpaten.

(26) Two nurses or ladies-in-waiting standing behind a column, the base of which is seen on the right. Probably from the lost part on the left of the scene of Pl. II.

¹ *El Amarna* VI, Pl. II and *Mémoires de l'Institut Français*, VIII, 12.



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Other fragments in Prof. Petrie's collection, not shewn in the plates, include :

(27) Pieces of a cushioned footstool, just like that in Pl. II, but with coarser decoration of the woodwork, and so from a companion scene.

(28) A fragment of decoration, probably forming the lower rows of No. 1.

(29) A cushion above and woodwork below, like No. 2, of which it is perhaps the companion. A female foot in white sandal appears to rest on the woodwork.

(30) A large white cornice with coloured fronds, perhaps from the top of the kiosk or balcony.

(31) Two small men's heads together.

(32) Four small bald heads of servants or priests in a row (light flesh tints).

(33) The bottom of a palace window or its framework (?), shewing a panelled dado (blue on yellow)¹. Above this are blue panels.

Besides these there is a number of fragments of coarser sort, shewing flowers and birds, probably from a pavement. These are all chronicled here in the fear that the rarity of direct evidence from city sites will always give them a value which in themselves they do not carry.

¹ Cf. *El Amarna* I, Pl. VII.

ON THE POSITION OF WOMEN IN THE ANCIENT EGYPTIAN HIERARCHY





By AYLWARD M. BLACKMAN, D.Litt.

THE pieces of information that I have gathered together in this article indicate, I think, that scholars¹ have hitherto laid too much stress upon the inferiority of the part played by women in the worship of Egyptian divinities. That they have done so is doubtless due in large measure to the well-known and oft-quoted assertion of Herodotus, ii, § 35: *ἰρᾷται γυνή μὲν οὐδεμία οὔτε ἑρσεως θεοῦ οὔτε θηλέης, ἄνδρες δὲ πάντων τε καὶ πασέων* "No woman exercises the priestly office either for a god or a goddess, but men in all cases."

Yet this assertion is in disagreement with what the ancient authority himself says in two other passages of the same book. In § 54 he speaks of two women, priestesses, being carried away from Thebes by Phoenicians, *ἰρείας ἐκ Θηβέων ἐξαχθῆναι ὑπὸ Φοινίκων*, and again in § 56 he designates the same women *τὰς ἰρὰς γυναικας* "the consecrated (i.e., priestly) women."



Fig. 1. The *mrt* welcoming the king into the temple (after MARIETTE, *Abydos*, I, Pl. 30a).

As is shewn by two inscriptions in the great temple of Horus at Edfu, all temples in Ptolemaic times had musician-priestesses attached to them called  (*hnywt*) or  (*sm'nywt*), who are said to  "rattle the sistrum before them," i.e., before the divinities they served, or to  "make music for their kas²."

The same was clearly the case in earlier times as well. From the Fourth Dynasty onwards we meet with the *mrt*, a musician-priestess, whom the temple reliefs depict standing to receive the king, as he approaches a temple, with hand-clapping and welcoming cries of "he comes who brings, he comes who brings," (see Fig. 1)³, or as making music in the presence of divinities⁴. The *mrt* seems to be especially connected with the Sed-festival, and appears thereat in the company of another musician-priestess called the *s'dt*⁵. Her close association with the House of Gold⁶ (the sculptor's workshop), is possibly due to the fact

that she played a leading rôle in the above-mentioned festival, which was an occasion for

¹ See, e.g., GRIFFITH, *Cat. of the Demotic Papyri in the Rylands Library*, III, 84, n. 6; *Zeitsch. f. äg. Spr.*, 45, 110, n. 2; MASPERO in *Annales du Service des antiquités de l'Égypte*, v, 90; MAX MÜLLER, *The Mythology of All Races* (Egyptian), 191 foll.

² ROCHEMONTAIX, *Le Temple d'Edfu*, I, 329, 336; BRUGSCH, *Dictionnaire géographique*, 1358, 1368.

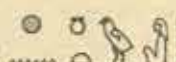
³ MARIETTE, *Abydos*, I, Pl. 30a; SETHE ap. BORCHARDT, *Das Grabdenkmal des Königs Sâthi-re^c*, II, 102; KEES, *Der Opfertanz des ägyptischen Königs*, 104 foll.

⁴ KEES, *op. cit.*, 106, 226.

⁵ PETHIE, *Ehnasiya*, Pl. 20.

⁶ KEES, *op. cit.*, 107.

the making of statues and for the performing on them of the rite of Opening the Mouth, this taking place in the House of Gold¹. The division into an Upper Egyptian and Lower Egyptian *mrt*, which goes back to the Fourth Dynasty², is also probably due to this priestess participating in the Sed-festival, the representations of which are always divided into two halves, an Upper and a Lower Egyptian. Kees is very possibly correct in regarding the *mrt* as "hieroglyphic as it were" for the large body of musician-priestesses that actually participated in the performances depicted schematically in the temple reliefs—"an abstraction of them all³."

In the Middle Kingdom there were certainly musician-priestesses,  (*hnywt*), attached to the temple of Osiris at Abydos⁴ and to the temple of Hathor at Cusae⁵. In the New Kingdom there were musician-priestesses, *sm'nywt* or *hnywt*, of Osiris⁶, Isis⁷, Mut⁸, Hapi⁹, Horus of Anibeh in Nubia¹⁰, Hathor of Denderah¹¹, the Great Ennead of Karnak¹², Upwawet¹³, and above all of Amenrê¹⁴, whom, judging from surviving monuments, almost every woman who dwelt in or near Thebes during the New Kingdom seems to have served as musician-priestess. Again an inscription of Ramesses II, and also Ramesses III's adaptation of it, speak of the "great noble ladies of the temple of Ptah and the Hathors of the temple of Atum," who were evidently musician-priestesses, for they are spoken of as greeting the king (when he visited these temples) with jubilation and the beating of tambourines¹⁵.

An inscription in the great temple of Hathor at Denderah gives five titles of musician-priestesses of that goddess¹⁶. This doubtless means that there were five (chief?) musician-priestesses attached to the temple of Denderah in Ptolemaic times.

The two above-mentioned inscriptions at Edfu record, along with other information about the local cults, the special title assigned to the high-priest of the leading divinity of each of the forty-two nomes of Upper and Lower Egypt. Immediately after the high priest's title with its accompanying attribute "who officiates (*lr lht*) for him or her," i.e., the nome-divinity, mention is made of a female officiant, likewise possessed of a special title which is followed by the attribute "who rattles the sistrum in front of him or her." That the title of

¹ SETHE, *Urkunden des ägyptischen Altertums*, I, 114, line 11; DAVIES-GARDINER, *Tomb of Amenemhät*, 58; BLACKMAN in *Journal*, v, 155, 159.

² SETHE *op. cit.*, Borchardt, *loc. cit.*

³ KEES, *op. cit.*, 105 foll. *Mrt*, it is to be noted, is the title of the high-priestess of Thôth of Hermopolis (BRUGSCH, *Dictionnaire géographique*, 1361), who, along with Horus, is so closely associated with the Pharaoh's ceremonial toilet in the House of the Morning, the temple-vestry (BLACKMAN, *Journal*, v, 156; *Rec. de Trav.*, xxxix, 44 foll.). Was it as high-priestess, and perhaps therefore as wife, of Thôth (see below, pp. 11 foll.) that the *mrt* received the king on his arrival at a temple? However, in the pyramid-temple of Sahurê (SETHE *op. cit.*, Borchardt, *op. cit.*, p. 102) the Upper Egyptian *mrt* seems to be identified with Eileithyia (*Nhbt*) of El-Kâb (*Nhb*).

⁴ LANGE-SCHÄFER, *Grab- und Denksteine des mittleren Reichs*, I, no. 20126.

⁵ BLACKMAN, *Rock Tombs of Meir*, I, 22 foll., Pl. II; II, 24 foll., Pl. XV.

⁶ MARIETTE, *Cat. général des monuments d'Abydos*, 1174, 1175, 1179, 1187.

⁷ MARIETTE, *op. cit.*, 1189; WRESZINSKI, *Die Hohenpriester des Amon*, 16.

⁸ MARIETTE, *op. cit.*, 1190.

⁹ *Op. cit.*, 1139.

¹⁰ LEPSIUS, *Denkmäler aus Ägypten und Äthiopien*, III, Pls. 231 b, 232 b.

¹¹ DAVIES-GARDINER, *Tomb of Amenemhät*, 95.




¹² DAVIES-GARDINER, *loc. cit.*

¹³ WRESZINSKI, *op. cit.*, 42.

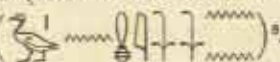
¹⁴ DÜMICHEN, *Historische Inschriften*, I, Pl. VIII, lines 6 foll.; NAVILLE in *Trans. Soc. Bibl. Arch.*, VII, Pl. opposite p. 119, lines 5 foll.

¹⁵ DÜMICHEN, *Bau-Urkunden der Tempelanlagen von Dendera*, Pl. VIII.

Journ. of Egypt. Arch. VII.

the female officiant should appear side by side with that of the high-priest indicates that she occupied the same position among the women who served in the temple, i.e., the musician-priestesses, as he did among the men, and quite justifies our speaking of her as a high-priestess. However, we have other evidence than this that the female officiant with the special title was head of the musician-priestesses. Her title at Denderah, which according to the Edfu inscription was  (*hnyt*), "Musician", occupies the first place in the above-mentioned enumeration of musician-priestesses in the Denderah temple. According to our Edfu authority again, her title in the Heliopolitan sun-temple was , which is doubtless to be read *wrt dhnywt* and translated "Chief of the female musicians". Lastly her title at Thebes is given as  (*dwyt*), "Adorer." Now this Adorer, or Adorer of the God (*dwyt ntr*) as she is more usually designated, who also bore the additional titles of God's Wife, God's Hand³, was, as we know, a high-priestess of Theban Amūn in every sense of the word—finally indeed usurping the title, if not exercising the functions, of Amūn's high-priest.

One would naturally expect the office of high-priestess to have been held as a rule by the wife of the high-priest, and there is some evidence of this having been actually the case.

Pepi'onkh the Middle⁴, as nomarch of Cusae, was high-priest (*imy-r' hmw ntr*) of the leading local divinity Ḥathor. His wife bore the title *hnyt nt Ḥthr*⁵, "Musician-priestess of Ḥathor," which, as the oft-quoted Edfu inscription informs us, was the title of the high-priestess of this goddess. Pepi'onkh's mother, wife of the preceding nomarch and high-priest Sebkhotpe⁶, also bore that title⁷. According to an inscription on the coffin of Imhotpe, a Ptolemaic high-priest of this same Ḥathor of Cusae, his mother Tihentet was high-priestess of the goddess. But Imhotpe's father, Tihentet's husband, had likewise been high-priest of Ḥathor of Cusae, as is shewn by the following words which also occur on the coffin in question:—"The Osiris Dsr h' Hr (title of the Cusite high-priest).....this Imhotpe the justified, son of a similar person" (⁸). Again, the Chief of the Concubines of Amūn seems generally to have been the wife of the High-priest of Amūn⁹, occasionally his sister¹⁰ or daughter¹¹. Lastly we read that after having officiated in person, doubtless for political reasons, as high-priest of the ram-god of Mendes—in theory of course the Pharaoh was *ex officio* high-priest of every Egyptian divinity¹², the acting high-priest being

¹ ROCHEMONTREIX, *op. cit.*, I, 339.

² See SETHE in *Zeitschr. f. äg. Spr.*, 55, 67.

³ The God's Hand is identical with the God's Wife. To describe her as "below the 'God's Wife' in rank, but above the chief concubine," as I have done in my article *Priest, Priesthood* (Egyptian) in HASTINGS, *Encyclopaedia of Religion and Ethics*, x, 297^a, is a mistake, which I take this opportunity of rectifying (see also below, p. 13).

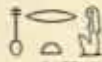
⁴ See BLACKMAN, *Rock Tombs of Meir*, I, 6, 10.

⁵ KAMAL in *Annales du Service des antiquités de l'Égypte*, xv, 214, 238.

⁶ BLACKMAN, *op. cit.*, I, 9.

⁷ KAMAL, *op. cit.*, xv, 214, where, according to my note-book, we should read *rht nwet*.





⁸ KAMAL, *op. cit.*, xv, 202.


⁹ WRESZINSKI, *Die Hohenpriester des Amon*, 10, 12, 22, 28.

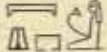
¹⁰ WRESZINSKI, *op. cit.*, 12, 19.

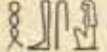
¹¹ *Op. cit.*, 11, 36. See also under *Thesen* on last page of WRESZINSKI's work.

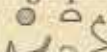
¹² See the writer's article *Priest, Priesthood* (Egyptian) in HASTINGS, *Encyclopaedia of Religion and Ethics*, x, 293 foll.

his delegate—Ptolemy II made his sacerdotal relations with the god complete by assigning to his wife, queen Arsinoë, the title *Wd3-b3f*, that of the high-priestess of this sacred ram¹.

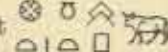
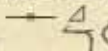
The high-priestess seems not merely to have been the head of the musician-priestesses; in some temples, as her respective titles indicate, she bore a very close relationship to the presiding divinity. At Elephantine the high-priestess was entitled  Satet², that is she was identified with, or impersonated, the goddess Satet the wife of Khnum, the god of the locality.

Horus, as is well known, was the king *par excellence*, every Pharaoh being regarded as his embodiment. The high-priestess of Horus of Edfu was entitled  (*hryt nst*), "She who is upon the throne³." This suggests that she was regarded as the wife of the god, the sharer of his throne in his capacity of king, being of course identified with Hathor, the consort of Horus of Edfu.

The high-priestess of Horus of Hierakonpolis, the capital of the twelfth Upper Egyptian nome, was entitled  (*hbst*) "Wife⁴," i.e., wife of Horus, probably again being identified with Hathor.

The high-priestess of Horus of Athribis in Lower Egypt was entitled  (*hwy*), "Protectress⁵," which is also the name of the local Hathor⁶, the consort of Horus the chief local god⁷. Thus as in the preceding instances the high-priestess filled the rôle of the god's wife.

The relationship of his high-priestess with the Letopolite Haroëris was not that of wife but of mother, she being entitled "Mother of the god⁸," and again identified with Hathor⁹.

At  City of Apis, the capital of the Western or third Lower Egyptian nome, the chief divinity was Hathor. Her high-priestess bore the title  (*snkwt*), "She who gives suck¹⁰," i.e., she was identified with the goddess Hathor, who either in human or bovine form, is so often depicted suckling the Pharaoh¹¹ (see Fig. 2), thereby imparting to him life, stability, and good fortune¹².

The outstanding instance of the high-priestess being the wife of the god is of course that of the high-priestess of the Theban Amūn, who bore as her title that of God's Wife, with the additional ones of Adorer of the God, Hand of the God¹³.



Fig. 2. Hathor suckles Sethos I (after MARIETTE, *Abydos*, I, Pl. 25).

¹ BRUGSCH, *Thesaurus Inscriptionum Aegyptiacarum*, 630, 663.

² ROCHEMONTEIX, *op. cit.*, I, 337.

³ *Ibid.*

⁴ See MÜLLER in *Zeitschr. f. äg. Spr.*, 55, 95 foll.

⁵ ROCHEMONTEIX, *op. cit.*, I, 332.

⁶ BRUGSCH, *Dictionnaire géographique*, 1392; BUDGE, *Gods of the Egyptians*, I, 432.

⁷ BRUGSCH, *op. cit.*, 637.

⁸ ROCHEMONTEIX, *op. cit.*, I, 330.

⁹ BUDGE, *op. cit.*, I, 467.

¹⁰ ROCHEMONTEIX, *loc. cit.*

¹¹ E.g., NAVILLE, *Temple of Deir el Bahari*, IV, Pls. CIV foll.; MORET, *Du caractère religieux de la royauté pharaonique*, 65, Fig. 10.

¹² See, e.g., SETH, *Urkunden*, IV, 239, lines 9, 13, and 240, line 2.

¹³ ERMAN, *Handbook of Egyptian Religion*, 72; *Life in Ancient Egypt*, 296; BREASTED, *Ancient Records*, IV, §§ 521, 942 foll., 958 c; LEGRAIN-NAVILLE, *L'Aile nord du pylône d'Aménophis III*, Pl. XI B.

In all the instances I have been able to cite of the high-priestess being regarded as the God's Wife, she has held that position owing to her identification with, or impersonation of, a goddess, who, with the exception, it would seem, of the goddess at Elephantine, was almost certainly Hathor. But this exception is probably only an apparent one, for certainly in the time of Ramesses II Satis was identified with Hathor¹. In quite early times Satis was brought into the myth about the sun-god's eye², and would thus have been associated with Hathor. She would surely, too, have been identified with Hathor in her capacity of Mistress of Heaven³, a position she naturally assumed on the ground of the identification of her consort Khnum with the Heliopolitan sun-god⁴.

We should expect, therefore, to find that at Thebes also the God's Wife was identified with a goddess, that goddess, moreover, being Hathor, and this, it would appear, is actually the case.

The earliest known instance of the wife of a Theban Pharaoh being assigned the title of God's Wife is that of Iahhotpe, the mother of Amosis I the founder of the Eighteenth Dynasty⁵. The two earliest occurrences of the title Hand of the God, as applied to the queen, date from the time of Hatshepsut and Amenophis II⁶. In an inscription dating from the reign of Tuthmosis III both these titles are assigned to Hathor mistress of *Htpt*⁷, that is the Heliopolitan Hathor the wife of the Heliopolitan sun-god.

Heliopolis, as, adopting Sethe's conclusions, I have maintained in previous articles in this *Journal*⁸, was at one time the political centre of predynastic Egypt. The predynastic king of Heliopolis was high-priest of the sun-god and was also regarded as his embodiment—Horus. The Heliopolitan queen, as wife of the sun-god's high-priest, would have acted as the sun-god's high-priestess⁹, and would also surely have been identified with the goddess Hathor the sun-god's wife, both in her capacity of high-priestess and also in that of wife of the embodiment of the sun-god.

Owing to the immense influence exercised by Heliopolis upon Egyptian theology and ideas in general, the king, even when Heliopolis ceased to be the political centre of Egypt, was still regarded as the embodiment of the sun-god,—a view that was naturally strongly maintained during the Third to Sixth Dynasties when the seat of government was fixed close to Heliopolis at Memphis.

The political ascendancy of the Heliopolitan sun-god induced his priests to identify a number of the local gods of Egypt with him. This would especially have happened when what was once a provincial town became the seat of government, as did Herakleopolis at the beginning of the Ninth, and Thebes at the beginning of the Eleventh Dynasty.

Thus when Thebes became the capital of Egypt the local god Amūn became Amenrē¹⁰. The Theban Pharaoh was of course Horus, the embodiment of the Heliopolitan sun-god,

¹ BRUGSCH, *Ägyptologie*, 289.

² SETHE, *Zur altägyptischen Sage vom Sonnenauge das in der Fremde war*, 7.

³ ROEDER in *Zeitschr. f. äg. Spr.* 45, 26 [3]; see also BUDGE, *op. cit.*, II, 55.

⁴ ERMAN, *Handbook of Egyptian Religion*, 57.

⁵ SETHE, *Urkunden*, IV, 29.

⁶ LEGRAIN-NAVILLÉ, *op. cit.*, *loc. cit.*, and LEPSIUS, *Denkmäler*, III, Pl. 62 b, respectively. See ERMAN in *Sitzungsberichte der königlichen preussischen Akademie der Wissenschaften*, 1916, XLV, 1145.

⁷ ERMAN, *loc. cit.*

⁸ See V, 117 foll., 153 foll.; see also *Proc. Soc. Bibl. Arch.*, XI, 57 foll., 85 foll.; *Rec. de Trav.*, XXXIX, 44 foll.

⁹ See above, p. 10.

while the Theban queen stood in the same relation to the sun-god as did the wives of the ancient Heliopolitan or Memphite rulers, being designated Adorer of the God, Wife of the God, Hand of the God, that is of the Heliopolitan sun-god. But as Amūn was identified with the sun-god, she was now regarded as Amūn's wife, *e.g.* queen Iahhotpe was designated God's Wife of Amūn¹.

This theory as to how the Theban Pharaoh's wife came to be regarded as the wife of Amūn is based upon the fact that the titles God's Wife, God's Hand, are, as ERMAN has recently shewn², frequently assigned to the Heliopolitan Hathor, while there is only one instance, and that Ptolemaic, of Mut, the actual consort of Amūn, appearing in this rôle—where also she is identified with Hathor of Heliopolis, being designated Mistress of Htp³.

Unfortunately this theory, though a highly probable one, cannot be proved by evidence derived from temple reliefs and inscriptions of Old and pre-Middle Kingdom date from Heliopolis and Herakleopolis, or of Middle Kingdom date from Thebes,—such material being either non-existent or at the most very scarce.

We have evidence, however, for the Solarization of the Herakleopolitan cult of the ram-god Harshef, which process doubtless dates from the time of the Ninth or Tenth Dynasty. One of the two pools attached to the temple of Harshef was definitely connected with the sun-god⁴. Chapter 125 of the *Book of the Dead*, Introduction, line 21, places the Phoenix in Herakleopolis. Harshef himself is addressed by one of his priests as "*Khnumrē, king of the Two Lands,.....whose right eye is the sun and whose left eye is the moon*"⁵, or as "*Harakhti the Lord of All,.....Atum in the nome of the Ncr-tree*"⁶.

The Hand of the God as a title of the God's Wife is clearly of Heliopolitan origin, it being the sun-god's hand that is said to have given birth to Shu and Tefēnet, his first-born children. Thus we hear of "*the hand of Atum, which gave birth to Shu and Tefēnet*," "*the god's hand.....the mother of Shu and Tefēnet*." Furthermore a passage in the *Pyramid Texts* explicitly asserts that this marvellous occurrence took place in Heliopolis⁷.

The title *dwyt ntr* "Adorer of the God" is also suggestive of a Heliopolitan origin. As I have pointed out in a previous article in the *Journal*⁸, *dw* "to adore" may be connected with *dw* "to do something in the morning," "arise early," and I have there suggested that the verb *dw* "to adore" may have originally meant "adore in the morning," and have come into use because it was his priests' custom to adore the sun-god at dawn. I pointed out, too, that hymns to the sun-god are commonly prefixed by the words *dw* *Rē*, "Adoration of Rē." It should be noted that when the priest had opened the doors of the shrine, preliminarily to performing the god's toilet, he was directed by the temple service-book to make a fourfold "adoration of the god"⁹, this adoration, according to one formula¹⁰, actually

¹ SETHE, *Urkunden*, IV, 29.

² *Sitzungsberichte der königl. preuss. Akademie der Wissenschaften*, 1916, XLV, 1145 foll.

³ *Ibid.*, 1146.

⁴ See BLACKMAN in *Proc. Soc. Bibl. Arch.*, XL, 88 foll.; *Rec. de Trav.*, XXXIX, 75, n. 8.

⁵ SETHE, *Urkunden*, II, 2 foll.

⁶ *Op. cit.*, II, 5.

⁷ ERMAN, *Zaubersprüche für Mutter und Kind*, 5, 8, and BRUGSCH, *Drei Festkalender*, Pl. V, II, line 11, respectively, both passages being cited by ERMAN in *Sitzungsberichte der königl. preuss. Akademie der Wissenschaften*, 1916, XLV, 1145. See also BLACKMAN in *Rec. de Trav.*, XXXIX, 71, n. 4, and 75.

⁸ SETHE, *Altägyptische Pyramidentexte*, § 1248.

⁹ v, 154.

¹⁰ See BLACKMAN in *Journal of the Manchester Egyptian and Oriental Society*, 1918-1919, 34, 40, 52.

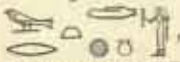
¹¹ *Ibid.*, 49, Karnak Liturgy, episode VII, formula e.

taking place at dawn. It should also be stated in this connection that the sanctuary or naos, in which the cultus-statue of a divinity (originally of course of the sun-god) was kept, was not infrequently designated "heaven" or "the horizon". Thus the revealing of the god's image on opening the doors of his naos was equated with the rising of the sun-god at dawn.

Briefly to sum up the evidence that the God's Wife was in the first instance a Solar institution. As has already been shewn on pp. 11 foll., the high-priestess in several temples fills the rôle of wife of the god to whom the particular temple is dedicated. As such she is almost certainly in every case identified with Hathor the wife of the Heliopolitan sun-god, the god himself being either Horus, the sun-god, or else having been identified with the sun-god by his priests. At Thebes the queen was the earthly wife of the Solarized Amūn, and as such bore the titles, not of Mut, who was Amūn's wife in his pre-Solar capacity of local god of Thebes, but those of the Heliopolitan Hathor, the wife of the sun-god with whom Amūn was identified in his capacity of state god.

The goddess Hathor was especially connected with music and dancing, and the performances of musician-priestesses were a notable feature in her cult. The musical instrument particularly associated with Hathor was of course the sistrum¹. Her priestesses also wore a special bead-necklace named *mnlt*, furnished with two metal counterpoises which hung down the back².

These musician-priestesses, when dancing and rattling their sistra in her worship, consciously impersonated the goddess—those attached to the temple of Atum at Heliopolis, being actually called Hathors³. During their performances they held out their sistra and bead-necklaces for their onlookers to touch, so imparting to them the blessing of the goddess—long life, prosperity, stability, health, and happiness⁴. The worshippers of Hathor were not merely brought into contact with her in the persons of her priestesses, but she was regarded as actually immanent also in her emblems, the sistra and bead-necklaces. Hathor, indeed, is not merely "Possessor of the *mnlt*," but is herself the *mnlt*⁵.

Owing to Hathor being assigned to the Heliopolitan sun-god as his consort, musician-priestesses were attached to the Heliopolitan sun-temple and their dancing and sistrum-playing thus became a feature of the sun-cult. This is shewn both by the title of the Heliopolitan high-priestess, as given in one of the two oft-quoted Edfu inscriptions, , "Chief of the Musicians," and by the passage just referred to from the inscription of Ramesses II, which speaks of "the Hathors of the temple of Atum" being in festival, their hearts rejoicing, their hands holding tambourines, and of how they cry out for joy when they see the Pharaoh's beautiful form. Thus not only was the high-priestess of the sun-god identified with Hathor, but the musician-priestesses over whom she presided were designated Hathors also⁶.

¹ *E.g.*, SETHE, *Urkunden*, IV, 159.

² See the article on sistra by N. DE G. DAVIES in this *Journal*, VI, 69 foll.

³ GARDINER, *Notes on the story of Sinuhe*, 100 foll.; BLACKMAN, *Rock Tombs of Meir*, II, 37.

⁴ *I.e.*, in the passage from the inscription of Ramesses II quoted above on p. 9.

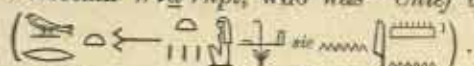
⁵ BLACKMAN, *op. cit.*, I, 22 foll.; II, 24.

⁶ MARIETTE, *Denderah*, II, 76, 80.

⁷ See SETHE in *Zeitschr. f. äg. Spr.*, 55, 67; BRUGSCH, *Dictionnaire géographique*, 1368.

* See also the inscription at Denderah (cited below, p. 23) which explicitly identifies with Hathor four of the five musician-priestesses therein enumerated.

a certain *Wld-rnpt*, who was "Chief of the Concubines and musician-priestess of Amūn"




Other gods besides Theban Amūn had earthly concubines assigned to them, namely Onuris², Harshef³, Khons, Min, Sobk, Thōth, Osiris⁴, Iunmutef⁵, and possibly Khnum of Hermopolis⁶, and Upwāwet of Asyūt⁷. It seems also probable that the "great noble ladies of the temple of Ptaḥ⁸" were regarded as Ptaḥ's concubines, for the women who are presumably the concubines of Upwāwet of Asyūt are also designated "noble ladies⁹."

Strange to relate we even hear of concubines of certain goddesses with a presiding Chief of the Concubines in each case, namely of Mut, Ubastet, Isis, and Nekhbet¹⁰.

One cannot help thinking that the giving of earthly concubines to a god was no less a Heliopolitan institution than the giving to him of an earthly wife and musician-priestesses. Since the high-priestess of the Heliopolitan Rē-Atum was doubtless, as we have seen, identified with Hathor and regarded as his wife, it is only natural that the musician-priestesses, also called Hathors, who were under her—they were certainly, as already stated on p. 15, attached to the house of the God's Wife at Thebes—should have been reckoned as Rē-Atum's secondary wives or concubines. There is some definite support for this view.

Sethe, in an article¹¹ already quoted from, points out that though our earliest example of the title "Chief of the Concubines" dates only from the New Kingdom, yet it is probably to be regarded as quite old on account of its form, which is the same as that of the titles of the high-priests of Heliopolis (*wr mꜣw* Chief of the Seers), Memphis (*wr ḥrpw ḥmwet* Chief of the Master-Artificers), Hermopolis (*wr dꜣw pr Dḥwtj* Chief of the Five of the House of Thōth), and Bubastis (*wr sunw* Chief of the Physicians),—the first three of which constantly occur in Old Kingdom inscriptions and of course come down from a still earlier epoch. It is also of the same form as *wrt dḥwtj* "Chief of the Musician-priestesses," the title of the officiant who appears in the Edfu inscription as high-priestess of Heliopolis, but who, when Heliopolis was the seat of government, or when the king and queen officiated in the sun-temple there, must surely, like the Chief of the Concubines at Thebes, have yielded first place to the royal God's Wife identified with Hathor.

Again, it is to be noted that the earliest mention of a god's concubines is that of the concubines of Iunmutef. This occurs on the coffin of a certain woman named Henti, a prophetess of Hathor and also designated Superintendent (*imyt-rꜣ*) of the Concubines () of Iunmutef¹². The coffin certainly dates from before the Twelfth Dynasty, probably from the Ninth or Tenth¹³, or, as Professor Newberry is inclined to think in view of its style of decoration, possibly earlier.

¹ MARIETTE, *Catalogue des monuments d'Abydos*, no. 1137.

² WRESZINSKI, *op. cit.*, 13; CAPART, *Zeitschr. f. äg. Spr.*, 41, 89.

³ WRESZINSKI, *loc. cit.*

⁴ GARDINER in *Zeitschr. f. äg. Spr.*, 48, p. 50, n. 2.

⁵ LACAU, *Sarcophages antérieurs au Nouvel Empire*, I, 17, 19.

⁶ LANGE-SCHÄFER, *Grab- und Denksteine des mittleren Reichs*, I, no. 20025, a, line 7.

⁷ GRIFFITH, *Sitt and Dér Rifeh*, Pl. 13, lines 29 foll.; BRUGSCH, *Hieroglyphisch-demotisches Wörterbuch*, Supplement, 938.

⁸ DÜMICHEN, *Historische Inschriften*, I, Pl. VIII, line 6.

⁹ GRIFFITH, *loc. cit.*

¹⁰ *Zeitschr. f. äg. Spr.*, 55, 67.

¹¹ See above, n. 5.

¹² GARDINER, *loc. cit.*

¹³ See MACE-WINLOCK, *Tomb of Senebtisi*, 114 foll.

Now the god Iunmutf, frequently impersonated by a human officiant, was a form of Horus and closely connected with the kingship from remote times¹, e.g., it is he who is always depicted burning incense in front of the king in the procession to the House of the Morning. He has also connections with Heliopolis other than his association with the early kingship and his identification with Horus. Chapter 172 of the *Book of the Dead* places him in the Heliopolitan sun-temple and asserts that he is there seen supporting Rē^c upon his head—that is he was, as his name implies, one of the supports of his mother the celestial cow-goddess, across whose belly sailed the sun in his ship².

That an essentially non-Theban god should be assigned earthly concubines before the time of the Middle Kingdom suggests that they were not primarily a Theban institution. That the god in question should be so closely connected with Heliopolis and the sun-cult suggests that they were a Heliopolitan institution. With this agrees the form of the title, which, as pointed out three paragraphs back, is distinctly early.

To return to the God's Wife. From the Fifth Dynasty onwards, or, as the writer maintains, from the period in the predynastic age when Heliopolis was the seat of government, the king was regarded as the physical son of the sun-god—"son of Rē^c of his body³." According to the well-known series of scenes and inscriptions in the temple of Hatshepsut at Dêr el-Bahri and of Amenophis III at Luxor, Amûn, identified with the Heliopolitan sun-god, incorporated himself in the reigning Pharaoh, had intercourse with the queen, and so begat the heir to the throne. The queen was thus the God's Wife in every sense of the word.

The account of this wondrous happening as given by the priestly scribes of the New Kingdom is as follows:—"This august god Amûn, lord of the Thrones of the Two Lands (i.e. Karnak) came, when he had made his mode of being (hpr-f) the majesty of this her husband, the king of Upper and Lower Egypt 'Okheperkerē^c. They (i.e. the combination of god and king) found her as she slept in the beauty of her palace. She awoke because of the savour of the god, and she laughed in the presence of his majesty. He came to her straightway. He was ardent for her. He gave his heart unto her. He let her see him in his form of a god, after he came before her. She rejoiced at beholding his beauty, his love it went through her body. The palace was flooded with the savour of the god, all his odours were as (those of) Punt. Then the majesty of this god did all he desired with her. She let him rejoice over her. She kissed him....."⁴

There is a most remarkable fayence statuette in the Cairo museum representing the God's Wife, Amenirdis I, sitting on the lap of her divine lover Amûn, their arms being flung round one another in close embrace. Such *abandon* is entirely unexpected in Egyptian art of this period, indeed, as Legrain asserts, it finds no parallel in all Egyptian art outside the productions of certain of the artists and sculptors attached to the court of Akhenaten at El-Amarna. Legrain gives a very appreciative description of this statuette in *Rec. de Trav.*, xxxi, 139 foll., and publishes two excellent photographs of the same in his *Statues de rois et de particuliers* (Catalogue général des antiquités égyptiennes du Musée du Caire), III, Pl. VII.

¹ See the writer's article *Priest, Priesthood* (Egyptian) in HASTINGS, *Encyclopaedia of Religion and Ethics*, x, 295.

² BLACKMAN in *Journal*, v, 122.

³ LEPSIUS, *Denkmäler aus Ägypten und Äthiopien*, III, Pls. 4 e, 5 d, and *passim*.

⁴ SETHE, *Urkunden*, iv, 219 foll.

The temple of Luxor, as already pointed out, was called the Southern *Harim* of Amūn. Was the union of the god with the queen supposed to take place therein? If so that would account for the scenes of the begetting and birth of the Pharaoh being depicted on the walls of one of the rooms of the temple. We should thus also have an early parallel or prototype for the birth-chapel adjoining temples of the Ptolemaic age, the chapel in which ceremonies were performed celebrating both the confinement of the goddess, the wife of the god to whom the temple was dedicated, and also her giving birth to a son, the third person of the divine triad¹.

As we have seen, the first actually recorded God's Wife is Iahhotpe, the mother of Amōsis I (see above, p. 12) and the wife of Kemōse, the last king of the Seventeenth Dynasty². Occasionally, as apparently in the case of the Chief of the Concubines of Amūn, there seem to have been two simultaneous holders of the title God's Wife, i.e. Hātshepsut and her little daughter Nefrurē³ both bore the title⁴.

After the fall of the Twentieth Dynasty about the year 1090 B.C., Thebes became a more or less independent principality under the rule of the high-priests of Amūn. But from the reign of Osorkon III of the Twenty-third Dynasty, about 720 B.C., to that of Psammetikhos III of the Twenty-sixth Dynasty, about 525 B.C., Thebes was ruled, not by the high-priests, but by a succession of five God's Wives. The God's Wife was now no longer the wife of the Pharaoh; a princess of the reigning house was assigned the title and had to adopt a daughter to succeed her.

The first of these sacerdotal princesses of Thebes was Shepenupet, Osorkon III's daughter. When the Nubian king Pi'onkhi⁵ became Pharaoh he compelled her to adopt as her daughter his sister-in-law⁶ Amenirdis⁷, the daughter of Kashta, and this Amenirdis in her turn adopted Shepenupet II⁸, Pi'onkhi's daughter and her (Amenirdis') niece. Shepenupet II first adopted Taharka's daughter, Amenirdis II, but, nine years after his accession, Psammetikhos I made her adopt his daughter Nitokris, who later on adopted Enkhnesneferibrē⁹ the daughter of Psammetikhos II¹⁰. There were thus five, not six, successive sacerdotal princesses of Thebes, for Shepenupet II was not dead at the installation of Nitokris and so Amenirdis II never held office.

The adopted daughter was called "the Great Daughter¹¹," but Nitokris, because she in reality supplanted Shepenupet II, her adoption as daughter being merely a political expedient, was straight away styled God's Wife, Adorer of the God¹². Enkhnesneferibrē¹³ on the other hand did not receive the title God's Wife, Adorer of the God, till Nitokris her mother by adoption was dead¹⁴.

¹ See CHASSINAT in *Bulletin de l'Institut français d'archéologie orientale du Caire*, x, 191 foll.

² BREASTED, *Ancient Records*, II, § 33.

³ SETHE, *Urkunden*, IV, 396, 406.

⁴ For this vocalization see MÖLLER in *Zeitschr. f. äg. Spr.*, 56, 77.

⁵ Mr Griffith informs me that Pi'onkhi married a daughter of Kashta. He was therefore the brother-in-law of Amenirdis.

⁶ For a statue of Amenirdis see LEGRAIN, *Statues et statuettes de rois et de particuliers*, III, 6 foll., Pl. VI.

⁷ For a statue of Shepenupet II, see LEGRAIN, *op. cit.*, III, Pl. VIII.

⁸ BREASTED, *Ancient Records*, IV, §§ 477 foll., 503 foll.; ERMAN in *Zeitschr. f. äg. Spr.*, 35, 28 foll.

⁹ BREASTED, *op. cit.*, IV, §§ 942, 946.

¹⁰ DARESSY in *Annales du Service des antiquités de l'Égypte*, v, 95; BREASTED, *op. cit.*, IV, § 958 c; see also § 942.

¹¹ *Op. cit.*, § 988 H.

While Thebes was governed by these sacerdotal princesses, the high-priest of Amūn, e.g. Harkhab who held that office in the time of Shepenupet II and Nitokris, played a very minor political rôle. He seems, indeed, to have been nothing but a religious figure-head, all real power being in the hands of individuals of minor sacerdotal importance such as Mentemhēt¹, who, though only fourth prophet of Amūn, was Bâsha of Thebes and Governor of the whole South². Ibe, the chief steward of Nitokris, must also have carried considerable political weight³. Finally, on the occasion of her adoption by the God's Wife Nitokris, the first prophetship of Amūn was bestowed upon Enkhnesneferibrē⁴.

It must have been to these God's Wives, or rather to their less exalted successors during the Persian domination, that Herodotus referred when he spoke of the woman who "lies in the temple of Theban Zeus." The whole passage in question is as follows: "*And in the uppermost tower (he is speaking of the tower with diminishing stories in the precincts of Zeus Bélos at Babylon) there is a large sanctuary, and in this sanctuary is set a large couch well upholstered, and beside it stands a golden table. No statue whatever is set up there, nor does any man pass the night there, but a woman only, one of the natives, whomever the god may choose out of all—as the Chaldaeans who are the priests of this god tell one. And these same say, although I credit them not, that the god himself comes to the temple and reclines on the couch, just as the Egyptians say is the case in Egyptian Thebes. For there too a woman lies in the temple of Theban Zeus. Now both these women are said to have no intercourse with any man.*"

Legrain⁵ points out the discrepancy between what Herodotus tells us about the earthly consort of Amūn and the following statement of Strabo: τῷ δὲ Διὶ, ὃν μάλιστα τιμῶσιν, εὐειδεστάτη καὶ γένους λαμπροτάτου παρθένος ἱερᾶται, ἃς καλοῦσιν οἱ Ἕλληνες παλλακὰς· αὕτη δὲ καὶ παλλακεύει καὶ σύνεστιν οἷς βούλεται, μέχρις ἂν ἡ φυσικὴ γένηται κάθαρσις τοῦ σώματος· μετὰ δὲ τὴν κάθαρσιν δίδεται πρὸς ἄνδρα· πρὶν δὲ δοθῆναι, πένθος αὐτῆς ἄγεται μετὰ τὸν τῆς παλλακείας καιρόν. "As for Zeus, whom they especially revere, a maiden of exquisite beauty and most illustrious family serves him as priestess, (one of those maidens) whom the Greeks designate concubines. She acts as concubine to, and has intercourse with, whom she will, until her (first) menstrual purgation takes place. After the purgation she is given to a man in marriage. But before she is so given, mourning is made for her after the season of concubinage has expired."

As Legrain observes, the God's Wife, according to Herodotus, had nothing to do with any man, while Strabo says she might pick up with any man she fancied down to the time of her first menstrual purgation, which in the case of girls of the Thebaid would, Legrain says, occur at the age of nine. But the sacerdotal princesses seem to have held office to an advanced age, unless they happened to be supplanted. Nitokris was installed as Wife of the God in the ninth year of Psammetikhos I and did not die till the fourth year of Apries⁶, when she had been sacerdotal princess for sixty-three years. Enkhnesneferibrē⁷ held office into the reign of Psammetikhos III, when she was at least eighty years old⁸.

¹ *Op. cit.*, § 937; MASPERO in *Annales du Service des antiquités de l'Égypte*, v, 90.

² ERMAN, *Zeitschr. f. äg. Spr.*, 35, 18, lines 20 foll.; BREASTED, *op. cit.*, iv, § 949.

³ BREASTED, *op. cit.*, iv, §§ 958 A foll.

⁴ *Op. cit.*, iv, § 988 D; MASPERO, *Études de mythologie et d'archéologie*, viii, 306 foll.

⁵ HERODOTUS, Book I, §§ 181 foll.

⁶ *Rec. de Trav.*, xxxi, 140 foll.

⁷ MSS. παλλάδας.

⁸ STRABO, *Geographica* (ed. G. Kramer, Berlin 1852), book xvii, § 46.

⁹ BREASTED, *op. cit.*, iv, §§ 938, 944, 988 G.

¹⁰ *Op. cit.*, § 988 B.

Accordingly Legrain tries to reconcile the conflicting accounts of the two classical authors in the following way. He suggests that when Herodotus visited Egypt, circa 484-425 B.C., the women consecrated to Theban Amūn lived just as he relates; but that when Strabo went to Thebes four hundred years or more later in the reign of Augustus, he actually did find a woman who might be described as a *παλλακή* installed as Wife of the God, and discharging that office in a very different manner from that in which it was discharged by the great sacerdotal princesses of Thebes—Shepenupet, Amenirdis, Nitokris, and Enkhnesneferibrē. "Should we," asks Legrain, "see in this change of conduct a normal decline of the Theban religion, which was just at the point of expiring, or rather the consequences of the deliberate policy of the Ptolemies, who, as much as they could, strove to annihilate the once formidable power of the Theban clergy, and to discredit their cult by letting it wallow in the depravity of the cults of Syria?"

To come to the point raised at the beginning of the paper. What actually were the functions of these Egyptian priestesses, and could they exercise the priestly office for a divinity?

The chief functions of the God's Wife at Thebes, as also of the other high-priestesses, were, it would seem, to rattle the sistrum and to sing in honour of the divinity or divinities during the performance of the temple services. As we have already seen, the special designation of each of the high-priestesses in the two Edfu inscriptions is followed by the attribute "*playing with the sistrum before him or her*." The God's Wife Enkhnesneferibrē is said to be "*pure-handed when holding the sistrum*" and to "*content Amūn with her voice*"¹; she is also spoken of as "*carrying flowers in the temple*"². The word *lhyt*, the title of the high-priestess of Amūn of Napata, is determined with a woman rattling a sistrum, thus indicating what was considered to be a characteristic duty of this officiant. The temple-reliefs constantly depict the queen, in the capacity of high-priestess, shaking a sistrum while the king, in the capacity of high-priest, burns incense or pours out a libation before a divinity³. Similarly Ani's wife accompanies his hymn of praise to Osiris, by rattling her sistrum⁴. The royal daughters likewise rattle their sistra while king Akhenaten and his queen make offering to or worship the solar disk⁵.

One of those, unhappily very rare, detailed representations of episodes in the temple liturgy, viz., a relief in the temple at Luxor⁶, depicts the king and the high-priestess of Amenrē bringing up the rear of a procession of priests who are carrying boxes of clothing, wherein, doubtless, the god's cultus-image is to be arrayed. The king holds out the *hrp*-or *ḥb*-bâton and is said to be "*extending the arm four times*," i.e. he is consecrating⁷ the clothing. He clearly, however, forms part of the procession, for between him and the high-priestess are the words "*Bringing Clothing*," (*hrp mnht*). We must here have, pictorially combined in one, what were really two distinct actions, namely a procession of priests (at the tail end of which walked the king and high-priestess), conveying the clothing into the sanctuary, and the consecration of that clothing by the king, the high-priestess' part in the proceedings being either to sing a hymn or chant a formula (see next paragraph).

¹ MASPERO, *Études de mythologie et d'archéologie*, VIII, 309 = *Annales du Service des antiquités de l'Égypte*, v, 92.

² MASPERO, *op. cit.*, VIII, 301 = *Annales du Service*, v, 85.

³ MASPERO, *Dawn of Civilization*, ed. 1894, p. 272.

⁴ BUDGE, *Book of the Dead*, Translation, Pl. VI, facing p. lxi.

⁵ DAVIES, *El Amarna*, II, Pls. V, VII, VIII; v, Pls. III, XXXIII.

⁶ GAYET, *Temple de Louxor*, Pl. LI, Fig. 104.

⁷ See KEES, *Opfertanz des ägyptischen Königs*, 59.

In another similarly detailed relief in the same temple the high-priestess of Amen-rē is shewn standing behind a male officiant¹—a *Sem* or Pillar-of-his-Mother—who is engaged in summoning² Amūn and the cotemplar divinities to their repast with the words: "Come to your bread, to your roast meat of the evening meal, which your son Amenophis.....has given you." The high-priestess' right hand is raised in adoration, palm outwards, and she is doubtless supposed to be chanting, simultaneously with the priest, the formula of summoning the divinities (see Fig. 3).

The high-priestess would of course have been assisted in the execution of her musical performances by the musician-priestesses (*šm'yt* or *hnywt*), who at Thebes, as we have already learnt, are definitely stated to have been attached to the house of the God's Wife, and with whom, at Thebes



Fig. 3. (After GAYET, *Temple de Lenzor*, Pl. XXXV, Fig. 138).

and elsewhere, the concubines (*hnrwt*) are probably to be identified. Thus the Decree of Canopus directs that Berenike be "adored by the musician-priestesses (*šm'yt*) chosen to serve the gods, being crowned with the diadems of the gods in whose service they officiate." A relief in one of the tomb-chapels at Meir depicts a festival of Hathor in process of being celebrated. The *ihwey*-priests click their castanets and the musician-priestesses shake their sistra in company with, not in this case Hathor's high-priestess, but high-priest, who himself holds a large and elaborately formed sistrum³. A relief at Karnak depicts a band of male and female musicians taking part in a religious celebration, apparently a procession. First in order come three musician-priestesses (*šm'yt*) singing and clapping their hands. Next to them are three musician-priests (*šm'yt*) wearing close-fitting skull-caps and short kilts, and likewise singing and clapping their hands.

A number of *wēeb*-priests and prophets (*wēeb*), with the right hand held before the face and the left hanging at the side, bring up the rear⁴. It might here be noted that, in addition to musician-priestesses, the Decree of Canopus speaks of choirs of male and female musicians (*šm'yt*), by whom Berenike was hymned daily and also on the occasion of festivals and processions. The hymns used on these occasions were composed by the hierogrammateis of the House of Life and handed over to the choir-master, a copy of them being entered in the books of the House of Life⁵.

The rattling of the sistrum was supposed to keep at a distance what was evil or inimical to the gods. Thus we read: "I dispel what is hostile by means of the sistrum in my hand⁶." The king heads the procession of priests carrying divinities, sacred emblems, etc. up to the roof of the temple of Denderah on New-Year's morning. Beside the king walks the queen, rattling two sistra. An accompanying text represents her as saying: "I have taken the sistrum, I grasp the *shin*-sistrum, and drive away him who is hostile to the Mistress of Heaven⁷." Again the little Harsamtōwi, as he rattles his sistrum in front of his mother

¹ GAYET, *op. cit.*, Pl. XXXV, fig. 138.

² SETHE, *Urkunden*, II, 151.

³ MASPERO, *Études de mythologie et d'archéologie*, VIII, 353 = *Rec. de Trav.*, XXXII, 88.

⁴ SETHE, *op. cit.*, II, 151 foll.

⁵ MARIETTE, *Denderah*, IV, Pl. 18.

⁶ See MARIETTE, *Abydos*, I, Pls. 40 a, 51 b.

⁷ BLACKMAN, *Rock Tombs of Meir*, II, Pl. XV.

⁸ BRUGSCH, *Hieroglyphisch-demotisches Wörterbuch*, 1649.

Hathor, exclaims: "I drive away what is hostile every day without ceasing¹." Completely consonant with this conception is the statement of Plutarch: τὸν γὰρ Τυφῶνά φασι τοῖς σείστροις ἀποτρέπειν καὶ ἀποκρούεσθαι, "For they say they repel and beat off Typhon with sistra²."

In the New Kingdom women of all classes, from the highest to the lowest, were attached as musician-priestesses to some temple or other. Kerōme, the daughter of king Takelōt II, served as a musician-priestess in the temple of Amūn at Karnak³, and so too did the daughter of a high-priest of that god⁴, the wife of a *Sem*-priest of Sokar at Thebes⁵, the sister of a high-priest of Mont who was both daughter-in-law of a high-priest of Amūn, and also sister-in-law of a high-priest of Amūn and of a Viceroy of Nubia⁶.

Tekhaç, the wife of Pennē the administrator of Anibah, is entitled "*musician-priestess* (*šmçyt*) of *Horus lord of Anibah*," i.e., she rattled the sistrum and danced and sang in the local temple⁷. The same lady is also designated "*musician-priestess of Amūn*," which, if not purely an honorific title, probably means that there was a temple of Amūn at Anibah. All the female relatives, or wives of relatives, depicted in Lepsius' *Denkmäler aus Ägypten und Äthiopien*, III, Pl. 230, are musician-priestesses, and of the four wives of relatives shewn on Pl. 231 b of the same volume of that work, two are musician-priestesses of Amūn and the other two musician-priestesses of Horus of Anibah.

A woman, apparently unmarried, and of no particular standing, was a musician-priestess of Osiris⁸, as were also two wives of weavers⁹. A superintendent of craftsmen had five daughters who were musician-priestesses of Amūn¹⁰. Such, too, was the wife of a shoemaker¹¹.

Dr Gardiner¹², discussing a scene in the tomb-chapel of Amenemhēt, paints a very pleasant picture of the doings of Hathor's priestesses on the occasion of her festival, which was observed all over Egypt on the first day of the fourth winter month. There would probably have been a special celebration in every temple followed by a procession through the town, after which the musician-priestesses, who, as we have seen, were closely associated with Hathor, would have paraded the streets, stopping at one house after another in order to bestow the goddess' blessing on the inmates. As they danced and sang they held out to their audience—perhaps that they might touch them—the emblems of Hathor, the sistra and the *mnit*-necklaces, which bestowed life, stability, health, and happiness. The above-mentioned scene in the tomb-chapel of Amenemhēt depicts such a performance taking place in a private house. The officiants are the musician-priestesses (*hnywt*) of Amūn of Karnak, of the Ennead which is in Karnak, of Hathor mistress of Denderah, and the *ihwey*-priests of Hathor mistress of Denderah. Evidently, owing to the proximity of the one city to the other, actual priests and priestesses from Hathor's temple at Denderah came to Thebes for the celebration of the goddess' festival there,—sure that considerable gains would accrue to them from their performances in the thronged streets of the immensely wealthy capital of Imperial Egypt.

The functions of Egyptian priestesses, so far as we have discussed them, might well be

¹ MARIETTE, *Denderah*, I, Pl. 68.

² *De Iside et Osiride*, chapter 63.

³ BREASTED, *Records*, IV, § 755.

⁴ *Op. cit.*, § 641.

⁵ LIEBLEIN, *Hieroglyphisches Namen-Wörterbuch*, no. 905.

⁶ LIEBLEIN, *ibid.*

⁷ LEPSIUS, *Denkmäler*, III, Pl. 232 b.

⁸ MARIETTE, *Catalogue d'Abydos*, no. 1179.

⁹ *Op. cit.*, nos. 1175, 1187.

¹⁰ LIEBLEIN, *op. cit.*, no. 944.

¹¹ MARIETTE, *op. cit.*, no. 1174.

¹² DAVIES-GARDINER, *Tomb of Amenemhēt*, 94 foll.

said to be of secondary importance, consisting merely in singing the praises of divinities,—perhaps chanting offering-formulae as well—playing on musical instruments, and dancing. Herodotus, therefore, would seem to be justified in asserting that no woman exercised the priestly office.


But their functions, even if purely musical, were far from being as unimportant as might appear at first sight. The musician-priestesses impersonated a goddess, namely Hathor, and in that capacity were able, as we have seen, to confer divine favours and graces on that divinity's devotees. To such an extent was this impersonation carried that the priestesses in the sun-temple at Heliopolis were actually spoken of as Hathors¹. Thus a number of musician-priestesses, in the guise of Hathors, are occasionally depicted beating tambourines while the priest-king makes an offering². One out of seven such Hathors is reproduced as



Fig. 4. A musician-priestess in the guise of Hathor (after MARIETTE, *Denderah*, III, Pl. 59).



Fig. 5. Hathor as a mnt (after MARIETTE, *Denderah*, II, Pl. 80).

Fig. 4. Moreover out of five titles of musician-priestesses recorded at Denderah, three are clearly designations of Hathor herself. These three titles are: "*Great Mnit-necklace, mistress of the sšš- and šm-sistra*"; "*Divine Mnt-necklace, royal wife, Isis*"; "*She who unites with the red cloth, she who is upon her throne*". With regard to the first and second titles, Hathor, as has already been pointed out on p. 14, was entitled , "the Mnit-necklace," and was indeed actually visualized and depicted in that form (see Fig. 5)⁴. It is hardly necessary to comment on the mention of Isis in the second title, she and Hathor being regularly identified with one another, especially in the late period. As for the third title, the goddess with whom the ceremonial red cloth (ins) is usually identified is Uto "the eye of Rē"⁵. But

¹ See above pp. 9 and 14.

² LEPSIUS, *Denkmäler*, IV, Pl. 26; MARIETTE, *Denderah*, III, Pl. 59; see also WILKINSON, *Manners and Customs of the Ancient Egyptians*, ed. Birch, I, 465.

³ DÜMICHEN, *Bau-Ürkunden der Tempelanlagen von Dendera*, Pl. VIII.


⁴ MARIETTE, *Denderah*, II, Pl. 80. ⁵ MORET, *Rituel du culte divin journalier en Égypte*, 185.

Hathor is also the eye of Rē, and Uto and Hathor are constantly identified with one another¹. For an example of the actual association of the red cloth with Hathor see ROCHEMONTEIX, *Edfou*, I, 57, where she is designated "*Mistress of the red cloth*."

Again, we have seen that in several temples the high-priestess was identified with the wife or mother of the god to whom the temple was dedicated, the goddess being in every case a form of Hathor. Such a rôle can hardly be described as secondary or unimportant, even if in that capacity the functions of the high-priestess, no less than those of her subordinates, were primarily musical, for the goddess impersonated was herself a musician and dancer in one, and that a very prominent, aspect.

But there is some evidence for supposing that priestesses could execute other than musical functions.

In the city of Apis, for example, the high-priestess was entitled "she who suckles²." As stated above on p. 11, Hathor, either as a cow or a woman, is constantly represented suckling the king. At Apis, when the sacred cow was not used for this purpose, the high-priestess herself, impersonating or identified with the goddess, may, as her title implies, have offered her breast to the king and so imparted to him life, stability, and good fortune.

Female members of important families during the Old and Middle Kingdoms often bear the title  "prophetess," it being generally the goddesses Hathor and Neith whom they served in this capacity³. Occasionally, however, a lady was prophetess of a god or a king. Thus in the Old Kingdom the *rht nsut* Hetepheres, besides being a prophetess of Hathor and Neith, was also a prophetess of king Kheops⁴. Queen Meres'onkh was a prophetess of Thôth⁵. The *rht nsut* Nofret was a *w'bt*-priestess of Upwâwet⁶. In one of the Middle Kingdom *Kahun Papyri* mention is made of the widow of a soldier who was a *w'bt*-priestess⁷. According to a Middle Kingdom stele in the Cairo Museum, Sment, mother of the scribe Neferhotpe, was a *w'bt*-priestess of Khons⁸. In Saitic times Nitemhê was assigned by her father Peteôse, high-priest of Amûn of Teuzoi, "the share of the prophet of Khons," who was also worshipped at Teuzoi⁹, and to 'Enkhnesneferibrê, on her adoption by the God's Wife Nitokris, was made over the first prophetship of Amûn¹⁰. Lastly, as late as the Ptolemaic period we hear of the daughter of a "father of the god" who was a *w'bt*-priestess of Amûn and a prophetess of Zême¹¹.

Griffith, commenting on the assignment of a prophetship to Nitemhê, refers to the statement of Herodotus cited at the beginning of this article, and presumes "that Nitemhê did not act as prophet of Khons: she only received the stipend, while the duty would be performed by her husband¹²," who was a prophet in Teuzoi temple. Maspero takes the same view with regard to the first prophetship of Amûn held by 'Enkhnesneferibrê, supposing

¹ E.g., BUDGE, *Gods of the Egyptians*, I, 431 foll.

² BRUGSCH, *Dictionnaire géographique*, p. 1368 = ROCHEMONTEIX, *Edfou*, I, 330.

³ ERMAN, *Life in Ancient Egypt*, 290. The wives of the Beni Hasan princes were prophetesses of Pakhet as well as of Hathor (NEWBERRY, *Beni Hasan*, I, 14, 43).

⁴ MARIETTE, *Mastabas de l'ancien empire*, 90.

⁵ MARIETTE, *op. cit.*, 183.

⁶ LEPSIUS, *Denkmäler*, II, Pl. 100 b.

⁷ GRIFFITH, *Kahun Papyri*, text, 32 foll.

⁸ LANGE-SCHÄFER, *Grab- und Denksteine des Mittleren Reichs*, I, no. 20056.

⁹ GRIFFITH, *Cat. of the Demotic Papyri in the Rylands Library*, III, 84.

¹⁰ MASPERO in *Annales du Service*, v, 85, 89 = *Études de mythologie et d'archéologie*, VIII, 301.

¹¹ GRIFFITH-WILCKES, *Zeitschr. f. äg. Spr.*, 45, 110.

¹² GRIFFITH, *Cat. of the Demotic Papyri in the Rylands Library*, III, 84, n. 6.

that it was only an honorific title and that "the princess had beside her a priest who performed the rites for her, those at least which a man only had the right to perform".

This view of Griffith and Maspero finds support in a passage in the Decree of Canopus which designates the musician-priestesses (*šmꜥywt*) as *wꜥbwt*². Perhaps, therefore, all the above-mentioned prophetesses and *wꜥbwt* are to be regarded as exercising no other than musical functions, except possibly the high-priestess in the city of Apis.

But on the other hand Nekꜥonkh, an Old Kingdom noble and high-priest of Hathor of Rešōne, appointed all his children, one of whom was a girl, to act as priests of that goddess. Nekꜥonkh does not differentiate between the functions of the daughter and the sons; she receives the same stipend as they do, and like them she is to perform by rotation her priestly course of a month's duration³.

The Ethiopian queen-mother *Nusrus* and the princess *Hb*, both of whom filled the office of high-priestess (*hꜥyt*) of Amūn of Napata, are depicted not merely rattling sistra

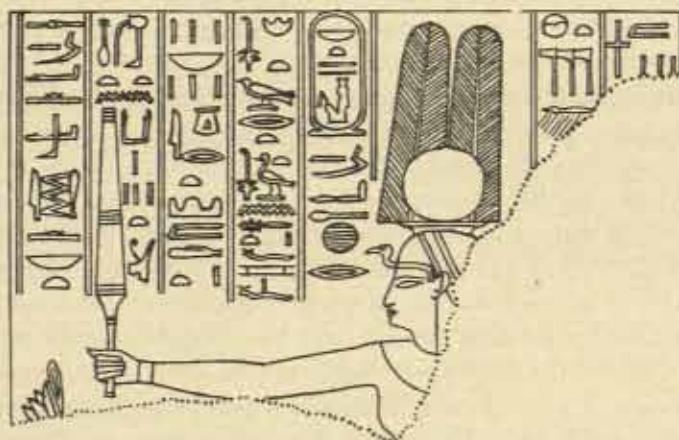


Fig. 6. Queen Nebttōwi making offering (after LEPSIUS, *Denkmäler*, III, pl. 172 f.).

before the god, but also pouring out libation⁴—a very important priestly function⁵. Thus at the installation of the high-priestess of Amūn of Napata, we are informed, a silver pail for libations was placed in her right hand and a silver sistrum in her left⁶.

A relief in the tomb-chapel of Princess Nebttōwi in the Valley of the Queens at Thebes (see Fig. 6), shews her "causing every good and pure offering to be produced" for "the lords of the necropolis (*Īgrt*). The princess' right arm is extended over the offering (a small portion of which is still visible), the hand grasping the so-called *hꜥp*- or *ḥꜥ*-bâton, i.e. she is represented as having reached the stage in the proceedings when the officiant consecrated, or finally made over, the offering to the god by performing the act known as "extending the arm four times over or towards" (*hꜥwt ʿ sp 4 r*) the offering⁷. This is in every sense of the word a sacerdotal act, being always, if he were present, performed by the king himself in

¹ MASPERO in *Annales du Service*, v, 90 = *Études de mythologie et d'archéologie*, VIII, 307.

² SETHE, *Urkunden*, II, 150 foll.

³ *Op. cit.*, I, 24 foll.

⁴ SCHÄFER in *Zeitschr. f. äg. Spr.*, 33, 103, Pl. IV; cf. SCHÄFER, *Äthiopische Königsinschrift des Berliner Museums*, Pl. I.

⁵ BLACKMAN in *Zeitschr. f. äg. Spr.*, 50, 69 foll.

⁶ SCHÄFER in *Zeitschr. f. äg. Spr.*, 33, 107.

⁷ See e.g. GAYET, *Temple de Louxor*, Pl. XL, Fig. 132; see also above, p. 20.

his capacity of high-priest, even when the other ceremonies connected with the presentation of food- and drink-offerings were carried out by assisting priests¹. When the king is depicted as performing the act he regularly holds the above-named bâton in his right hand, the hand of the arm extended. According to a relief in the temple of Sethos I at Abydos², the bâton was dispensed with when an ordinary priest consecrated an offering. It is all the more remarkable, therefore, that the princess should be shown holding it.


A scene in the tomb of the Nineteenth Dynasty king Amenmesses³ depicts his mother(?) Tekha⁴ offering wine to a divinity⁵,—an act of the priest-king constantly occurring among the reliefs on the temple walls⁶.

On the first day of every dekad Isis, we are told, went from Philae to Bigah to make libation to Osiris in his sacred grove⁷. This rite would surely have been performed by a female officiant impersonating Isis.

The very passage in the Decree of Canopus that gives the musician-priestesses the title of *w'but* not only directs that they are to make music in honour of Berenike, but also ordains that when the Early Sowing comes they are to carry ears of corn into the temple and present them to the deified princess' image⁸.

Moreover, according to the same decree, at the celebration of the Kikellia in the fourth winter month, before the periplus of Osiris, the young girls of the priests were "*to make ready another image of Berenike queen of Maidens*" and were to offer a burnt-sacrifice to it and perform the other rites that were customary on the occasion of this festival⁹.

We know definitely that, at least in the Ptolemaic period, there were female funerary libationers (*χοαχῦτιδες*)¹⁰, they and the male libationers (*χοαχῦται*) playing the rôle of the ka-servants (*ḥmw-kʿ*) of earlier times, i.e. they were responsible for the upkeep of the tombs, the safety of the mummies interred therein, and for the performance of those ceremonies upon which the welfare of the dead was thought to depend¹¹. As their names indicate, one of their chief duties was to pour out libations to the dead, the ancient daily funerary liturgy having degenerated into little more than the recitation of certain formulae accompanied by the pouring out of water¹².

Judging from the way the compound  *ḥmw-kʿ* is determined in two Old Kingdom inscriptions¹³, the ka-servants at that period, like the "libationers" of Ptolemaic times, were of both sexes. The functions of a ka-servant included the burning of incense, the pouring out of libations, and the presenting of food- and drink-offerings, a formula being recited at the performance of each act. It should be noted in this connection that a deceased Old Kingdom noble left explicit directions for his wife to "*come forth unto the voice*" for him with certain barley, spelt, and clothing, due to him from the king's house¹⁴.

¹ See e.g., GAYET, *op. cit.*, Pls. XXXIV, Fig. 139, XXXV, Fig. 138.

² MARIETTE, *Abydos*, I, Pl. 48, b.

³ GAUTHIER, *Livre des rois d'Égypte*, III, 129.

⁴ LEPSIUS, *Denkmäler*, III, Pl. 202 f.

⁵ See e.g. BLACKMAN, *Temple of Derr*, Pl. V, 2; LEPSIUS, *op. cit.*, Pl. 46, a.

⁶ BLACKMAN in *Journal*, III, 32.

⁷ SETHE, *Urkunden*, II, 150 foll.

⁸ SETHE, *op. cit.*, II, 142 foll.

⁹ OTTO, *Priester und Tempel*, I, 102 foll.; GRIFFITH-WILCKEN in *Zeitschr. f. äg. Spr.*, 45, 104; GRIFFITH, *Cat. of the Demotic Papyri in the Rylands Library*, III, 27-30.

¹⁰ OTTO, *op. cit.*, I, 100.

¹¹ BLACKMAN, *op. cit.*, III, 33.

¹² SETHE, *Urkunden*, I, 11 foll., 36.


¹³ MORET, *Académie des inscriptions et belles-lettres: comptes rendus*, 1914, p. 541, lines 1 foll.

In the Old, Middle, and New Kingdoms two female officiants impersonating Isis and Nephthys took part in the procession of the corpse to the embalmer's workshop and in some of the ceremonies performed therein, and also in the procession to the tomb on the day of burial¹.

In the face of all this information, and especially that regarding the priestly functions of Nek'onkh's daughter, we really have some justification for maintaining that Egyptian priestesses of the higher grades such as prophetesses and *wēbt*-priestesses, besides impersonating goddesses and making music and offering flowers, did sometimes perform actual sacerdotal duties (*ipāsthai*) in the temples, i.e., make offerings to divinities, burn incense, pour out libations, in short act as chief officiant in the daily temple liturgy.

With respect to the position of women in the funerary hierarchy, we can definitely assert that in addition to playing the rôle of mourning goddesses such as Isis and Nephthys, female officiants could, at least in Ptolemaic times, perform the funerary liturgy, there being, moreover, indications that this last-mentioned practice was not a Ptolemaic innovation but one that can be traced back to the Old Kingdom.

* * * * *

Egyptian priestesses had to undergo the same purification as priests before taking part in a temple service. A fragmentary relief dating from the reign of Hatshepsut² shows a priest and a priestess standing in a shallow tank, while water is being sprinkled over them by a lustrator (figure broken away) standing behind either of them. Compare the word-sign for *wēbt*-priest () and also the well-known representation in the tomb-chapel scenes of the washing of a funerary officiant's hands by another officiant standing behind and pouring water on them from over his head³. To the right of this scene of ablutions, and separated from it by two lines of inscription, are two pairs of officiants, one above the other. The first of the top pair is the God's Wife, the remaining three persons are "fathers of the god." The inscription refers to both groups of figures and reads as follows: "Going down to wash by the prophets and the God's Wife, the God's Hand, in the Cool Pool⁴ (and then) entering into the temple."

The female wailers who impersonated Isis and Nephthys and other goddesses at the annual re-enactment of the embalmment of Osiris had to purify themselves "four times for seven days to seven days"⁵ before standing in the door of the Broad Hall⁶. These women, we learn, washed their mouths and chewed natron and fumigated themselves with burning incense so that their beatifications of Osiris might be pure⁷. In their lament uttered at the first hour of the night they say: "Ah! I have washed my mouth, I have chewed natron, I have fumigated myself with burning incense. I am pure, clean, and censed, with natron that has come from El-Kāb, with incense that has come from Punt, the sweet perfume that

¹ BLACKMAN in *Journal of the Manchester Egyptian and Oriental Society*, 1917-18, 12 foll.; DAVIES-GARDINER, *Tomb of Amenemhāt*, p. 45 with n. 4, p. 49, and *Tomb of Antefoker*, 20 foll., Pls. xvii foll., xxi foll.

² LEGRAIN-NAVILLÉ, *L'Aile nord du pylône d'Amenophis III*, Pl. XI B.

³ VON BISSING, *Gemnikai*, II, Pl. XIX; BLACKMAN, *Rock Tombs of Meir*, III, Pl. XXIII.

⁴ Cool Pool is also the name of the sacred Solar Pool at Kherēcha (*Proc. Soc. Bibl. Arch.*, XL, 88, n. 97).

⁵ JUNKER, *Grammatik der Denderatexte*, § 199, (10).

⁶ MARIETTE, *Denderah*, IV, Pl. 44 c; JUNKER, *Die Stundenweachen in den Osirismysterien*, 6.

⁷ Cf. *Rec. de Trav.*, XXXVI, 6, where we read that the *Blue Jeune*, welcoming the Pharaoh on his arrival at the House of the Morning, say, in anticipation of the purification he is to undergo therein, "what issues from his mouth is pure."

has come from the eye of Horus. How pure are the beatifications of Osiris-Khentamenthes among the Gods the Worshippers of Horus! How goodly are the beatifications of Osiris-Khentamenthes! How festive are the beatifications of Osiris-Khentamenthes!" It is said with regard to the two female mourners (*drty*) who, impersonating Isis and Nephthys, bewailed Osiris in the House of Osiris from the twenty-second to the twenty-sixth day of the fourth winter month, that their bodies must be pure and the hair of their bodies removed¹.

High-priestesses, like high-priests², seem to have been appointed to their offices by the king himself. Thus king Aspalta appointed a member of the reigning family to be high-priestess (*ihyt*) of Amūn of Napata, as his predecessor Anlaman had done³. Similarly each of the sacerdotal princesses of Thebes was appointed by the reigning sovereign⁴.

With regard to the appointment of women to priestly offices below that of high-priestess, such appointments, as in the case of men, were probably made by the king or by his representative the local governor and high-priest, or they might be purchased, conveyed by deed of transference, or bequeathed to descendants.

Accordingly we find Peteēse, as representative of the king, writing his daughter Nitemhē "a title to the share of the prophet of Khons⁵," i.e. he assigned her the prophetship of that god and the emoluments attaching thereto.

Certainly the office of funerary priestess (*χοαχύτις*) could both be purchased and inherited⁶, for we find that in the year 136 B.C. a certain Taēsi made over to another woman called Shakhpēre, in return for a stipulated sum of money, "the emoluments, the tombs of the persons which have fallen to me in the name of the woman Taēsi daughter of Hōr, my mother, and of Wennofri, son of Hōr, my husband⁷."

Existing records apparently give no account of any performance that might be called an induction or investiture in the case of ordinary prophetesses or *wēb*-priestesses. But we know something about such a performance in the case of the high-priestess (*ihyt*) of Amūn at Napata and of the God's Wife at Thebes.

The Nubian king Aspalta had all his chief officers of State and the priests of Amūn lined up in the temple and informed them that he had appointed his daughter to the office of high-priestess. The actual ceremony of installing the princess as high-priestess, as stated on p. 25, consisted in putting a silver pail for libation into her right hand and a silver sistrum into her left⁸.

The installation of the Theban God's Wife was evidently a very impressive ceremony. We are told how she "went into the house of Amonrasōnther, the prophets, *wēb*-priests,

¹ JUNKER, *op. cit.*, 70 foll.

² *Festival Songs of Isis and Nephthys*, Title and Rubric = *Egyptian Hieratic Papyri in the British Museum*, Pl. I, Hieroglyphic Transcripts, p. 1.

³ See the writer's article *Priest, Priesthood* (Egyptian) in HASTINGS, *Encyclopaedia of Religion and Ethics*, x, 300.

⁴ SCHÄFER in *Zeitschr. f. äg. Spr.*, 33, 107.

⁵ ERMAN in *Zeitschr. f. äg. Spr.*, 35, 28 foll.; BREASTED, *Ancient Records*, iv, §§ 935 foll., 988 a foll.

⁶ GRIFFITH, *Cat. of the Demotic Papyri in the Rylands Library*, III, 84.

⁷ For such transactions in the case of priests' offices see my article *Priest, Priesthood* (Egyptian) in HASTINGS, *Encyclopaedia of Religion and Ethics*, x, 300.

⁸ GRIFFITH-WILCKEN in *Zeitschr. f. äg. Spr.*, 45, 104.

⁹ SCHÄFER in *Zeitschr. f. äg. Spr.*, 33, 107 foll.

lectors—the temple-staff of Amūn—following her, the great courtiers (smrw 3w) in front. She did all that was customary at the induction¹ into the temple of a God's Adorer of Amūn. The scribe of the god's book and nine² wē'eb-priests of this temple fastened on for her the amulets and all the ornaments of a God's Wife, God's Adorer of Amūn." She was then crowned with the double-plumed diadem and "appointed Mistress of the whole circuit of the solar disk," after which her titulary was enunciated. We are informed that "all the customary things were done for her as they were done for Tefēnet (daughter of the sun-god) in the first instance³."

Certainly from the time of the New Kingdom onwards musician-priestesses, like the priests, were divided into phylae or watches (*sšw*), with a female phylarch at the head of each⁴. According to Reitzenstein⁵, a priestess of the Graeco-Roman period who married a priest remained in her original phyle.

I will bring this paper to a close with an account of what we know about the payment of Egyptian priestesses.

The prophetship of the daughter of Nek'onkh who lived in the Fifth Dynasty, was endowed with five arouras of land, as were the prophetships of ten of her twelve brothers. In addition she and her brothers seem to have had equal shares in any donations which might be made to the temple⁶. Nitemhē, prophetess of Khons of Teuzoi, evidently received yearly, as did the rest of the prophets attached to that temple, one hundredth part of the income derived from the temple-endowment⁷. Besides this there were occasional fees and the additional "things...from the temple the field and the town," enumerated as linen, incense, oil, bread, ox-flesh, goose-flesh, wine, beer, lamp, herbs, milk⁸. These items, as Griffith points out, "might be offered to the deity or used in the ceremonies, and afterwards enjoyed as perquisites by the priests⁹."

The high-priestess of Amūn of Napata, we are informed, received a daily allowance, presumably from the temple store-house, of ten loaves of *bš*-bread and five loaves of white bread; a monthly allowance of fifteen jars of beer; while yearly she received three oxen. On festivals she was granted an extra supply of beer¹⁰. One must certainly agree with Schäfer in regarding this stipend as a very modest one. The bread would have supplied the needs of only a very small household, while the beer would seem to have been barely enough for the princess alone, fifteen jars a month being the equivalent of only half a jar a day! According to the Eloquent Peasant one *ds*-jar of beer and three loaves of bread were



¹ So *Annales du Service*, v, 85. The version given in *Études de mythologie*, VIII, reads "six."

² MASPERO in *Annales du Service des antiquités de l'Égypte*, v, 85 foll. = *Études de mythologie et d'archéologie*, VIII, 301.

³ LEGRAIN, *Statues et statuettes de rois et de particuliers*, I, nos. 42122, d, line 11; 42223, c, line 4, d, line 1; OTTO, *Priester und Tempel*, I, 35, 92.

⁴ *Zwei religiöse geschichtliche Fragen*, 19.

⁵ SETHE, *Urkunden*, I, 24 foll.; *Ägyptische Inschrift auf den Kauf eines Hauses aus dem alten Reich* in *Berichte über die Verhandlungen der königl. sächsischen Gesellschaft der Wissenschaften zu Leipzig*, Vol. 63, 1911, part 6, p. 149.

⁶ GRIFFITH, *Cat. of the Demotic Papyri in the Rylands Library*, III, 65, n. 4, 90, n. 5.

⁷ GRIFFITH, *op. cit.*, p. 45.

⁸ *Loc. cit.*, II, 14.

⁹ SCHÄFER in *Zeitschr. f. äg. Spr.*, 33, 108 foll.

sufficient for an ordinary man's (daily) needs¹, though, as a matter of fact, Rensi allowed the peasant, during his detention, two *ds*-jars of beer and four loaves a day².

The stipend of the high-priestess of Amūn in Saitic times was on a very different scale. She was endowed with 3300 arouras of land situated in seven nomes in Upper and four nomes in Lower Egypt. From various temples, mostly in Lower Egypt, and also from the first, third, and fourth prophets of Amūn, the wife of the fourth prophet, and also from the inspector of the prophets (*shd hmw-ntr*) she daily received an aggregate of 2100 *deben* (= 6300 ounces³) of bread. From the daily offering laid before the god in the Heliopolitan sun-temple she was apportioned every day two *khar* of spelt. In addition to all this she daily received eleven *hin* of wine, 2½ *sc*-cakes, 2½ bundles of vegetables, and monthly three oxen, five geese, and twenty *hbn*-jars of beer⁴.

The emoluments attaching to the funerary priesthoods held by women⁵ (see above, p. 28) were almost certainly derived from tomb-endowments, as they were in the case of funerary priesthoods held by men, *e.g.* Psammeth-menkhe gave so many arouras of land to Esamūn, a choachyte in the necropolis of Thebes, as endowment for the tomb of his mother Tsenenḥôr⁶.

Finally, we learn from the Decree of Canopus that the wives of priests were granted a (daily) allowance of loaves of bread⁷, which the decree directs are to be specially shaped and to be called henceforth the Bread of Berenike⁸. This decree also directs that the daughters of priests from the day of their birth are to be assigned rations derived from the temple endowment, namely rations apportioned by the Councillor priests in all the temples in proportion to the (respective) endowments⁹.

¹ See VOGELSANG, *Kommentar zu den Klagen des Bauern*, 88 foll., and GARDINER's remarks on the passage in question, *Proc. Soc. Bibl. Arch.*, xxxiv, 273 foll.

² VOGELSANG, *op. cit.*, 79 foll.; GARDINER, *loc. cit.*

³ GRIFFITH, *op. cit.*, III, 80, n. 7.

⁴ BREASTED, *Ancient Records*, IV, §§ 949 foll.

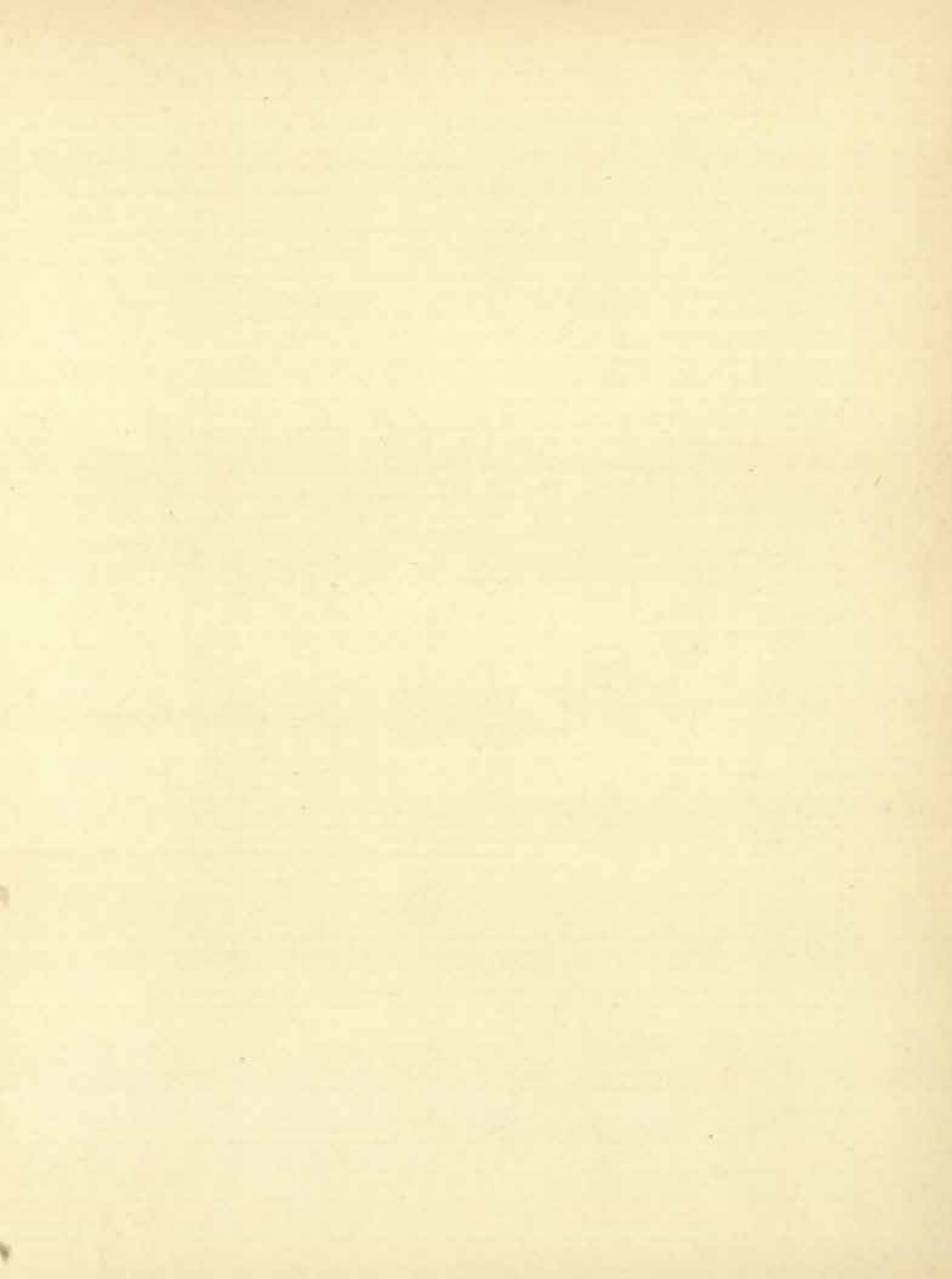
⁵ See GRIFFITH, *op. cit.*, III, 29 (54).

⁶ GRIFFITH, *op. cit.*, III, 22; see also *op. cit.*, 29 (54). For similar endowments in the earlier periods, see SETHE, *Urkunden*, I, 11 foll., 35 foll.; BREASTED, *op. cit.*, I, §§ 535 foll., 630 foll.; PEET in *Liverpool Annals of Archaeology and Anthropology*, VII, 81 foll.

⁷ That the wives of priests received a *daily* allowance of bread is indicated by the Adoption Stela of Nitokris, according to which the wife of the fourth prophet of Amūn gave the God's Wife 100 *deben* (300 ounces) of bread a day *i.e.* from her own *daily* allowance (BREASTED, *Ancient Records*, IV, § 951).

⁸ SETHE, *Urkunden*, II, 153.

⁹ SETHE, *op. cit.*, II, 152 foll.





HAREMHAB IN THE FIELDS OF YALU

Bologna No. 1883

THE MEMPHITE TOMB OF KING HAREMHAB

By JEAN CAPART

DURING the first years of the nineteenth century an admirable monument of Egyptian art was unfortunately demolished by the antiquity-hunters who devastated the ancient burial-grounds in order to satisfy the demands of certain Europeans, the accredited purveyors to the large museums: namely the Memphite tomb of General Haremhâb, who was destined to ascend the throne at the end of the Eighteenth Dynasty, and whose royal tomb was discovered by Theodore Davis a few years ago in the valley of Bibân el-Mulûk at Thebes¹.

Various fragments of the Saqqârah tomb have found their way into European museums²: Leyden, London, Vienna and Bologna are in possession of pieces of it, identified chiefly through Breasted's researches³; the Cairo Museum has acquired several blocks that were discovered at Saqqârah itself by Mariette⁴. It seems that all hope of yet seeing the number of these fragments further increased is not vain, since, as will be shown, the Berlin Museum acquired a portion of a relief belonging to the same monument at Cairo in 1911.

In 1902, in the first volume of my *Recueil de Monuments Égyptiens*⁵, I drew attention to the technical perfection of the reliefs of Haremhâb preserved at Leyden, and expressed regret that nobody had thought of collecting them all in a single complete publication. Unfortunately, no one has been tempted to undertake this task; this is much to be regretted, for the photographic publication of the Leyden reliefs⁶, and of another in Bologna⁷ has sufficed to prove that no bas-relief of the New Kingdom except those of Tell el-Amarna can rival in perfection those of this Memphite tomb, the remains of which have been so deplorably scattered.

During a journey in Italy, in 1912, I had the opportunity of seeing at Bologna the fragment published by von Bissing, which depicts with extraordinary animation a band of negroes guarded by several Egyptians. My attention was also attracted to another fragment the provenance of which had been discovered by Breasted, and upon which is to be seen a representation of the Fields of Yalu, with Haremhâb occupied in tasks of husbandry. No photograph of this relief has been published until now (Pl. V). I asked myself how it was possible for Egyptologists who have studied the Bologna Museum not to have thought of connecting with the same series the four other blocks bearing the numbers 1886 (two fragments fitting together), 1888 and 1889 in Kminek-Szedlo's catalogue⁸ (Pls. VI—VII). A quite

¹ Theodore M. Davis' *Excavations: Biban el Molouk. The Tombs of Harmhabi and Touatankhamon*. London, 1912.

² For a recent discussion, see MASPERO's account, *op. cit.*, 12—18.

³ BREASTED, *Ancient Records*, III, 3—12, gives the antecedent bibliography.

⁴ MARIETTE, *Monuments Divers*, Pls. 74—5, with MASPERO's text, pp. 25—6.

⁵ Text to Pls. XXXV—XXXVIII.

⁶ BOESER, *Die Denkmäler des neuen Reichs*, Pls. XXI—XXV.

⁷ VON BISSING, *Denkmäler ägypt. Sculptur*, Pl. LXXXI a.

⁸ *Museo Civico di Bologna: Catalogo di antichità egizie*, Turin, 1895, 170—1. The piece representing the group of negroes, published by von Bissing, is in sunk relief, while the other fragments, including the Fields of Yalu, are in ordinary relief. Of the Leyden scenes, also, one is in simple, the other in sunk relief. We thus see that the two methods were used side by side in Haremhâb's tomb.

superficial examination of these bas-reliefs, and a comparison of them with those in the Leyden Museum, suffice to show how great are the stylistic analogies which they present. In both places the figures show identical features in the drawing of clothes and hair, features which appear but rarely in other monuments.

The four blocks just mentioned were acquired by the Bologna Museum at the same time as the scene of the Fields of Yalu and the group of negroes. These all come from the collection of Pelagio Palagi. One among them has deservedly attracted attention since the first generation of Egyptologists by the unusual representation of a horseman. Rosellini reproduced it in his *Monumenti Civili*¹. An Italian archaeologist, Zardetti, also published it in an article which appeared in 1835². It is said there that the Palagi collection was founded by J. Nizzoli, Chancellor of the Austrian Consulate at Cairo, and that the bas-relief with the horseman had apparently been discovered, according to Nizzoli's statement, in one of the catacombs of Thebes³. I wonder whether it is this vague indication of a Theban origin which has up to now prevented the attribution of this relief to the tomb of Haremhab. It is interesting to note that a Theban source had also been erroneously ascribed to another fragment undoubtedly belonging to this tomb. Breasted, as is well known, made the important discovery that the Vienna fragment joins one of the Leyden blocks. But when von Bergmann published the text of the Vienna monument⁴ he stated positively that it came from the wall of a Theban tomb. It would be interesting to know whence the Vienna Museum obtained this fragment. I suspect that it may have belonged to the Chancellor of the Austrian Consulate, Nizzoli, and have come from those hauls whence the Palagi collection received, as we have seen, the series of reliefs with which we are dealing. We must not forget, however, that the fragments of the tomb of Haremhab were divided among various amateurs; the Leyden reliefs, for example, came from the Humbert and Cimba collections. In his history of the Egyptian collection at Vienna⁵, Alexander Dedekind confines himself to mentioning the acquisition of the fragment by the Austrian collection during 1873. I do not think, therefore, that we need take the information in Zardetti's brochure seriously; it does not seem to be any more authentic than that given by von Bergmann, in almost identical terms, about a fragment of a relief which exactly fitted the remains of a wall of Haremhab's tomb at Sakkarah.

As long as the Theban origin is not proved, there is nothing to prevent us from considering the Bologna fragments nos. 1886, 1888 and 1889 as belonging to the same tomb. I have just said that the similarities of style are striking, and that they have convinced me that all these pieces really belonged to one whole. It will be seen that another student had already been struck by these similarities, without however being in a position to draw the necessary deductions from them.

In May 1919, H. Schäfer published the fragment of a bas-relief bought at Cairo in 1911 by the Berlin Museum⁶. The author observes, and rightly, that "it is one of the most attractive and remarkable among the most beautiful and instructive reliefs of the New

¹ Pl. CXX.

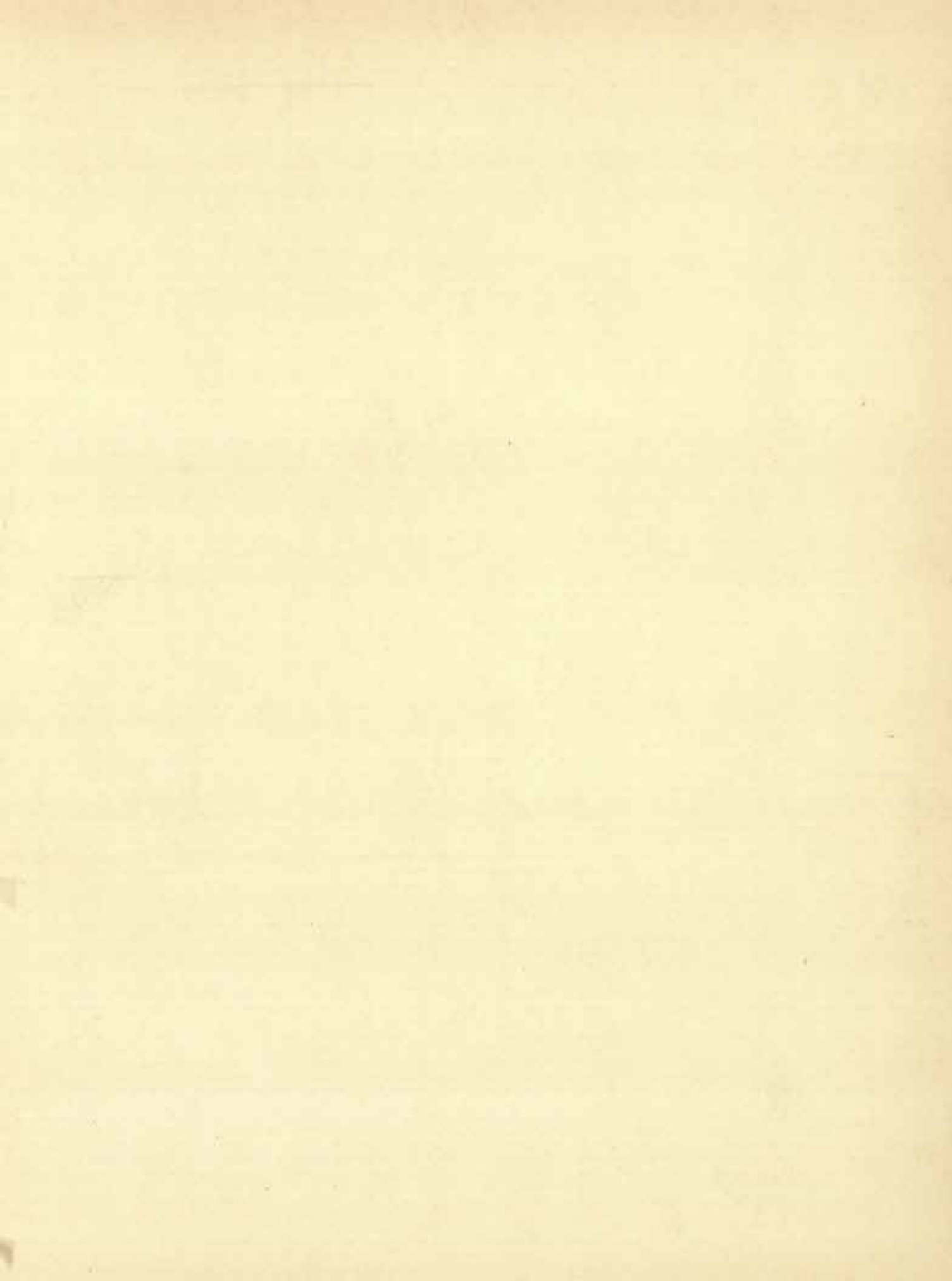
² *Lettera sopra due antichi monumenti egiziani posseduti dal Cav. pittore ed architetto Pelagio Palagi*. Milan, 1835, Pl. III.

³ *Op. cit.*, 5 and 20.

⁴ *Zeitschr. f. äg. Sprache*, 27, 126-7.

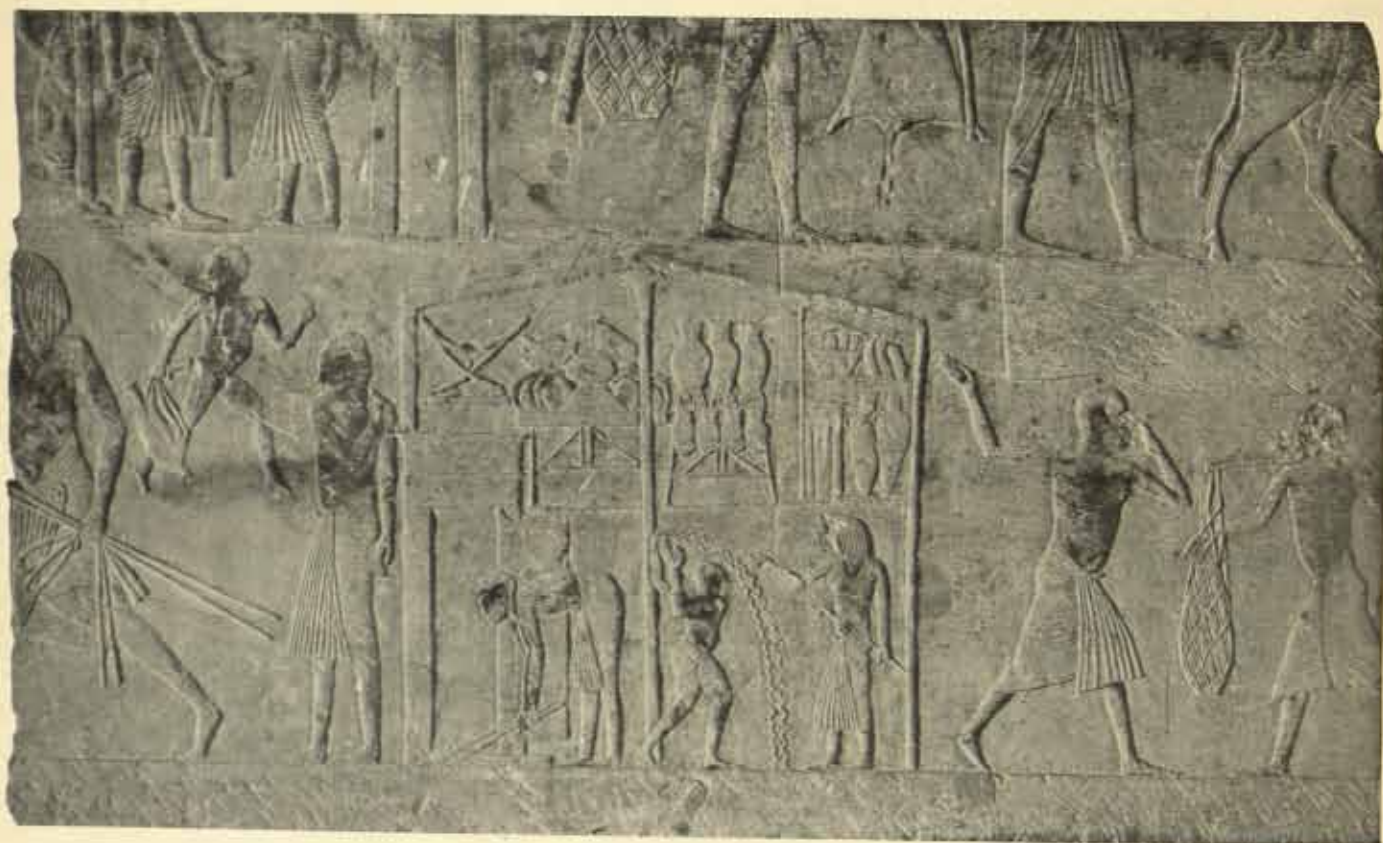
⁵ *Geschichte der kaiserlichen Sammlung alter ägyptischen Objekte in Wien*, Vienna, 1907, 26.

⁶ *Aus einem ägyptischen Kriegslager*, in the *Ämliche Berichte aus den preussischen Kunstsammlungen*, XI, no. 8, 154.





Bologna No. 1889



Bologna No. 1888

RELIEFS ATTRIBUTED TO THE TOMB OF HAREMHAB

Kingdom." Schäfer, after a very minute study, thought that the Berlin fragment must be ascribed to the middle of the Eighteenth Dynasty, the epoch of Amenophis III, "an epoch which already contained in embryo all the art of Amenophis IV." Nevertheless, he adds in a note that his colleague G. Möller suspects a connection with the reliefs of Haremhâb's tomb at Leyden. This impression is extremely important to note: Möller has thus had the Leyden reliefs in mind. What would he have said if he had known that the Berlin fragment exactly fits the upper part of block no. 1888 in the Bologna Museum (see Fig. 1)?

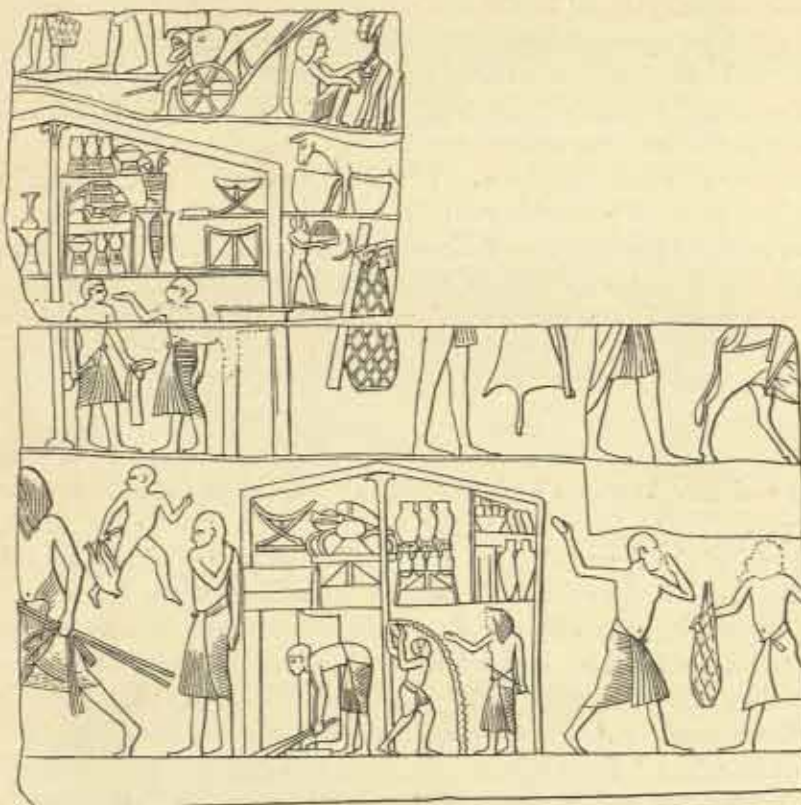


Fig. 1. Bologna 1888 + Berlin 20363.

He would have inferred from this that the Bologna blocks strangely resemble the fragments of Leyden, just as I remarked above.

Let us see if it is possible to point out some detail or other which will actually permit the fitting together, from the standpoint of artistic conception, of blocks nos. 1886, 1888 and 1889 at Bologna. It will be noticed in the drawing which shows the connection of block no. 1888 with the Berlin one, that one part of the scenes was arranged, not in regular and parallel registers, but along sinuous lines, evidently with intent to give the impression of a hilly landscape. This is exactly what fragment no. 1889 with the horseman shows us. Further, on fragment no. 1888 there is, to the left of the lower register, a little naked running figure, carrying an empty water-skin. The draughtsman has placed it high up in the field, without any ground-line for its feet to stand on; exactly the same arrangement is found with two figures on fragment no. 1886.

I do not think it necessary to describe minutely and at length the very animated scenes which the several Bologna blocks offer us. May it not be hoped that, attention

having been drawn to them, yet further fragments fitting these may be discovered, so that we may then form a more precise idea of the artist's intention? I confess that the examination of as much as we already possess does not seem to me to confirm the impression of Schäfer, who judged exclusively from the Berlin fragment. I do not believe that a military camp is represented. May not the buildings be interpreted as schematic representations of houses? The arrangement of the door on the Bologna block, at all events, seems to me to indicate an edifice of a more permanent kind than a military tent. If the representations of the Palace of Amenophis IV in the tomb of Meryrē¹ at Tell el-Amarna be referred to², it will be seen that no more solid appearance has been given to the royal dwelling than to what I believe to be houses on the Bologna relief completed by the Berlin fragment. The waterer and sweeper in front of the threshold recall the little fresco of Tell el-Amarna, celebrating the master's return to the house³.

The scene of the Fields of Yalu (Pl. V) deserves a careful study, which should be illustrated by copious material comprising all the variants made known to us by tomb-reliefs and vignettes of the papyri of the Book of the Dead. The style does not seem to me identical with that of the scenes of civil life in the same tomb. Other instances of this difference of treatment in the representation of the Fields of Yalu could be cited; in the tomb of Paatenemḥab at Leyden⁴, for example, the contrast is particularly striking. It may be questioned whether this is not the result of the draughtsman's copying the vignette of a summarily executed manuscript.

I have always been surprised to notice that every different representation of the Fields of Yalu offers variants. It would be interesting at some time to attempt to trace them to a few archetypes.

The elements of the theme, derived from traditional scenes of agriculture abundantly known from the Old Kingdom tombs, have been the subject of a quite typical transformation. In the Memphite mastabas the deceased's servants devote themselves, under the master's eye, to all the labours which were considered useful to the latter's well-being. It is not he who tills, who sows, who gathers the flax and the corn, it is not he who maintains the work of the animals which crush the grain on the threshing-floor. In the Fields of Yalu, on the contrary, all these labours are done by the defunct himself, assisted by his wife; and it is precisely to liberate them from this enforced toil that the Egyptians resorted to the use of the funerary statuettes known as "Ushabtis." It will be noticed that the Bologna relief shows us three servants occupied in gathering flax under the eye of the seated Ḥaremḥab. We have here a feature worthy of attention; I have not found it in any of the papyrus-vignettes. I may recall in this connection a very curious fragment of a relief which comes, as it so happens, from a Memphite tomb of the New Kingdom⁴. There may be seen the High Priest of Ptah, Meryptah, devoting himself to agricultural labour in company with his servants. He flings with full hands the grain which he has taken from a sack held out to him by one of his servants. Behind the latter six others break up the ground with hoes. It is just the sowing-sack of this type and these agricultural implements which form part of the usual equipment of the Ushabtis. It would be very interesting

¹ DAVIES, *El Amarna*, Part 1, Pls. XVIII and XXVI.

² PETRIE, *Tell el Amarna*, Pl. IV.

³ BOESER, *op. cit.*, Pls. I—XII.

⁴ WIEDEMANN-PÖRTNER, *Ägyptische Grabreliefs aus der grossherzoglichen Altertümersammlung zu Karlsruhe*, Strassburg, 1906, Pl. VII.



RELIEF ATTRIBUTED TO THE TOMB OF HAREMHAB

Bologna No. 1886

A GROUP OF HITHERTO UNPUBLISHED SCARABS IN THE METROPOLITAN MUSEUM, NEW YORK

BY ARTHUR C. MACE, M.A.

THE scarabs depicted in Pl. VIII, with the exception of the two last, are from the collection of the late Theodore M. Davis, at present deposited in the Museum on loan. A number of other scarabs from his collection were published by Professor Newberry, including two (NEWBERRY, *Scarabs*, XI, 29 and XLIV, 13) which then belonged to Mr Murch, but were subsequently acquired by Mr Davis.

Nos. 29 and 30 are from the late Mr J. Pierpont Morgan's collection, presented to the Museum by his son.

1—3. "*The good god, Ma'ayebre', granted life.*" Glazed steatite. Wing-cases not marked. Hyksos period.

4. "*The good god, Ma'ayebre', granted life.*" Glazed steatite. Wing-cases marked. Hyksos period.

5. "*The son of Re' Sheshi(?) living for ever.*" Glazed steatite. Wing-cases not marked. Hyksos period.

6. "*Guardian of the Royal Harim, Siptah.*" Glazed steatite. Wing-cases marked. XII Dyn.

Three other officials of this name are known from scarabs:—

(1) "*Chief Scribe of the Keeper of the Seal*" (*op. cit.*, XIV, 2).

(2) "*Overseer of Gold*" (PETRIE, *Scarabs and Cylinders with Names*, 13 AE).

(3) "*Elder of the Portal*" (*op. cit.*, 13 BH).

7. "*Royal Acquaintance, Nehy.*" Glazed steatite. Wing-cases marked. XII—XIV Dyn.

Five other officials of the same name occur:—

(1) "*Royal Clothier*" (NEWBERRY, *op. cit.*, XII, 7).

(2) "*Superintendent of the Interior of the Private Apartments (kp)*" (*op. cit.*, XIII, 11).

(3) "*Great one of the Southern Tens*" (*op. cit.*, XVII, 7).

(4) "*Scribe of the Army*" (*op. cit.*, XLIII, 5).

(5) "*Royal Friend*" (PETRIE, *op. cit.*, 13 S).

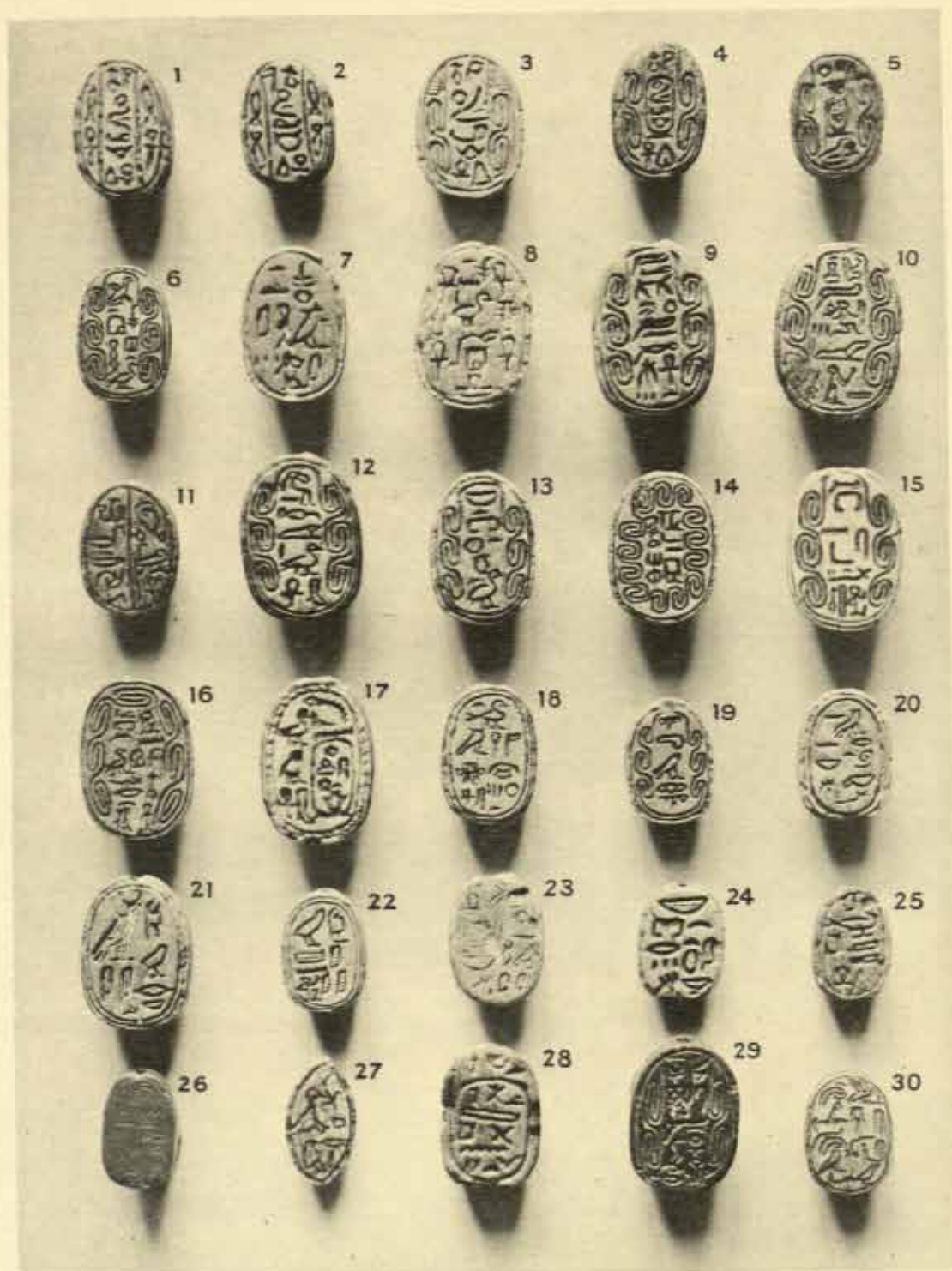
8. "*Royal Son, Sebekhotpe.*" Glazed steatite. Wing-cases marked. XIII Dyn.

9. "*Superintendent of the Interior, Superintendent of the Delta, 'Ankhmesut.*" Glazed steatite. Wing-cases marked. XII Dyn.

10. "*Royal Sealer, General, Sebeknakht, justified.*" Glazed steatite. Wing-cases marked. XII Dyn.

11. "*Royal Sealer, Keeper of the Seal, Har.*" Cf. No. 29. Glazed steatite. Wing-cases not marked. Hyksos period.

A great many other scarabs of this official are known. Three are published by Newberry (*op. cit.*, XXIII, 20—22), and thirteen by Petrie (*op. cit.*, 12 BU, 13 BT—CE). In addition to the two shown in this plate there is a third in the Metropolitan Museum, from the Ward Collection.



SCARABS FROM THE COLLECTION OF THE LATE MR. THEODORE M. DAVIS, ETC.

12. "*Child of the Private Apartments, Sisobk, repeating life.*" Glazed steatite. Wing-cases marked. XII Dyn.

Three other officials of this name are known from scarabs:—

(1) "*Great uartu of the (Royal) City*" (NEWBERRY, *op. cit.*, XI, 19).

(2) "*Royal Friend*" (*op. cit.*, XII, 16).

(3) "*Scribe of the Great Prison*" (*op. cit.*, XIV, 23).

13. "*Lady of the House, Sittekh.*" Glazed steatite. Wing-cases marked. XII Dyn.

A lady of this name is mentioned on a stela in Leyden (No. 103).

14. "*Guardian of the Storehouse, Y.....(?)*" Glazed steatite. Wing-cases marked.

XII—XIV Dyn.

15. "*Steward, Senebtify, justified.*" Glazed steatite. Wing-cases marked. XII Dyn.

Three other officials of this name are known from scarabs:—

(1) "*Superintendent of the Interior, Superintendent of the Delta*" (*op. cit.*, XII, 20).

(2) "*Overseer of the stone-gravers*" (PETRIE, *op. cit.*, 13 BO).

(3) "*Royal Sealer, Keeper of the Seal*" (*op. cit.*, 13 CK).

16. "*Guardian of the Royal Harim, Sinofret, repeating life.*" Glazed steatite. Wing-cases marked. XII—XIV Dyn.

17. "*Priest (w'eb) of Sehetepyebrē, Sau, repeating life.*" Glazed steatite. Wing-cases marked. XII—XIII Dyn.

A "prophet" of Sehetepyebrē, i.e. Amenemmes I, is quoted *Rec. de Trav.*, XIX, 85.

18. "*Daughter of the Priest, Nubemsa, repeating life.*" Glazed steatite. Wing-cases not marked. XII—XIV Dyn.

In Newberry (*op. cit.*, XII, 19) there is a "*Lady of the House, Nubemsa.*"

19. "*Surveyor, Harmin.*" Glazed steatite. Wing-cases marked. Two hawks incised on back. XII Dyn.

20. "*Overseer of Litigation, Kefnen (?), possessor of merit.*" Glazed steatite. Wing-cases marked. XII—XIV Dyn.

21. "*Attendant, Ary.*" Glazed steatite. Wing-cases marked. Hyksos period.

22. "*Attendant, Ameny.*" Glazed steatite. Wing-cases not marked. XII—XIV Dyn.

Three other officials of this name are known from scarabs:—

(1) "*Steward*" (NEWBERRY, *op. cit.*, XLIII, 4).

(2) "*Great one of the Southern Tens*" (PETRIE, *op. cit.*, 12 Y).

(3) "*Royal Clothier*" (*op. cit.*, 13 BJ and BK).

23. "*Royal Sealer, Superintendent of the Domain (?), Nehysenbi, possessor of merit.*" Glazed steatite. Wing-cases marked. XII—XIV Dyn.

24. "*Lady of the House, Ita, possessor of merit.*" Glazed steatite. Wing-cases marked. XII—XIV Dyn.

25. "*Son (?), Sheshi, granted life.*" Glazed steatite. Wing-cases not marked. Hyksos period.

26. "*Khentekhthai....*" Green jasper. Wing-cases marked. XII—XIV Dyn.

In Newberry (*op. cit.*, xv, 25) there is another scarab with this name.

27. "*Royal Son, Turi (?).*" Glazed steatite. XII—XIV Dyn.

At University College there is a scarab of this prince (PETRIE, *op. cit.*, 14 L).

28. "*Adorer of the god, Shepenupet.*" Glazed pottery. Wing-cases marked. XXVI Dyn.

There is another of her scarabs in the Louvre (PETRIE, *Historical Scarabs*, 1835), and one in the Hood Collection (NEWBERRY, *op. cit.*, XXXVII, 24).

29. "*Royal Sealer, Unique Friend, Keeper of the Seal, Har.*" Glazed steatite. Wing-cases marked. Hyksos period. Cf. No. 11.

30. "*Royal Sealer, Unique Friend, Keeper of the Seal, Senbsuma^c.*" Glazed steatite. Wing-cases not marked. XII Dyn.

This is one of the best known officials of this age, and a number of his scarabs are known. For his history see NEWBERRY, *op. cit.*, 126. There are in the Metropolitan Museum two other scarabs of his, from the Murch Collection.

We have now in the Metropolitan Museum, including the Davis, Ward and Murch Collections, and those from our own excavations, 132 scarabs with private names.

EGYPT AND THE EXTERNAL WORLD IN THE TIME OF AKHENATEN¹

By H. R. HALL, D.LITT.

THE Egypt Exploration Society has taken up the task of the German *Orient-Gesellschaft* in the excavation of the town of Akhetaten, the capital of the heretical king Amenophis IV or Akhenaten, at el-Amarna. Attention was drawn long ago to the remarkable art of the tombs and boundary-stelae at Amarna by Wilkinson and Lepsius, and stray antiquities in our museums were early identified as belonging to the "Disk-Worshippers." An influential Australian member of the Egypt Exploration Fund in its early days, the late Sir William Nicholson, was specially interested as an amateur of Egyptology in this curious period of Egyptian history, and devoted much time to its elucidation. The Fund, however, never bent its steps in the direction of Amarna until the present time. Professor Petrie excavated there in 1891, but at that time he was not commissioned by the Fund. No doubt his work there, the first important excavation attempted at Amarna, was prompted by the remarkable discovery in 1887 of the famous "Tell el-Amarna Tablets," that deeply interesting collection of cuneiform tablets, containing letters and despatches in Babylonian from the Egyptian court to the kings and governors of Western Asia, and from these last to one another, that have told us so much of the history of the times of Akhenaten and his contemporaries. Sir Ernest Budge has recently, in his book *By Nile and Tigris*, described the circumstances of the find, and how the precious tablets suffered from careless handling and destruction by the native finders, until eventually they found their way in three distinct batches to the museums of Berlin, London, and Cairo. At first considered for a moment to be forgeries (a common fate for unexpected finds), they were soon seen to be genuine antiquities of extraordinary historical importance, and we can only deplore the fate that decreed their discovery by ignorant and careless hands. Professor Petrie was no doubt in hopes of finding another deposit of tablets, nor was he altogether unsuccessful, as he recovered ten more, which are now in the Ashmolean Museum at Oxford. Other sporadic tablets are in a few other collections, and one has been discovered recently by the German excavators. We are therefore not without hope that the excavators of the Egypt Exploration Society may, if not this year then perhaps in the next, find more, which may still further increase our knowledge of the foreign relations of Egypt in Akhenaten's time. We may also hope that further illumination as to the relations between Mycenaean Greece and Egypt at this time may be derived from our excavations. Professor Petrie found a number of fragments of pottery that are of Cyprian and mainland Greek origin, belonging to the Third Late Minoan period of Evans, and we know that precisely at this date the Bronze Age Greeks imported various kinds of Egyptian *objets d'art* into their own country. At Mycenae itself, as well as at Ialysos on Rhodes, have been found contemporary scarabs of the parents of Akhenaten, Amenophis III and Teie; and similar finds on a larger scale, including Egyptian necklaces of gold and fine stones, were discovered by the British Museum expedition at

¹ A lecture delivered before the members of the Egypt Exploration Society on January 20, 1921.

Enkomi in Cyprus in the "nineties." We see generally, from a hundred small pieces of evidence, that relations of considerable magnitude existed between Egypt and Greece in the fifteenth and fourteenth centuries B.C., and it would not be unexpected were we to discover in our new excavations further proof of this connexion.

This world of the eastern Mediterranean lands in the fifteenth century B.C., with its four juxtaposed and competing civilizations of independent character if not of origin (questions as to the possible ultimate Egyptian origin of certain features of the Minoan culture or of possible ultimate Babylonian origin of certain "Hittite" features need not be discussed here), is of extraordinary interest. We really know a considerable amount about it, thanks chiefly to the Amarna tablets. Four independent civilizations, the Egyptian, the Babylonian, the Hittite, and the Minoan Greek, stood over against one another in close juxtaposition even for those days. Each was strongly national in its characteristics. Each had its own national costume, its own art, its peculiar writing, and its national gods. In the old days before the first Indo-European invasions had broken down the barriers of exclusivism all over this Near Eastern world (its result, the Hyksos conquest of Egypt, even destroying the previous isolation of the Nile-land), each of these cultures had pursued its own way, practically ignoring the other. We know little yet of the early history of the Hittite civilization of Anatolia, and can hardly guess at the date of its first appearance there. It may be as old as the others, it may be much younger. In any case it owed more than any of the others to foreign influence in its beginnings, though it always preserved its special national type, which clearly differentiates it from the rest and marks it out as a separate creation. The influence which modified it at an early period was that of Babylonia, for even as early as the middle of the third millennium B.C. Semites (as we know from recent discoveries of tablets) are found settled across the Taurus in the region of Argæus, with its centre the town Mazaka, later called Caesarea, the modern Kaisariyah. These Semites, if not actually Babylonians themselves, were Babylonians in culture. The Semitic world universally owed its civilization to the originally non-Semitic (Sumerian) inhabitants of Babylonia; the Sumerians invented the cuneiform syllabary in which the Semites wrote till their development in Syria and Phœnicia of the Aramaic-Phœnician alphabet, which Greece adopted to replace the forgotten sign-writing of the destroyed Minoan culture. Babylonian civilization had at an early date penetrated not only into Anatolia, but also into the more easily reached lands of Syria; and Sumerian kings like Lugalzaggisi (c. B.C. 3000) had planted their banners by the shores of the Mediterranean. A recent theory has even supposed that the Babylonian (Semitic) king Narām-Sin (c. 2850 B.C.) to whom the North-Syrian coast (Yarmūti, the later Yarimūta) and probably Palestine also was subject, invaded Egypt. The king of Māgan, Manium or Mannu-dannu by name, whom Narām-Sin mentions as defeated by him, is identified with the unifier of the Egyptian kingdom, Menes (Nārmerza) himself¹. But this theory, attractive as it may look at first sight, breaks down on the question of date, it being hardly possible to put Narām-Sin earlier than 2850 B.C., or Menes later than 3300 (the present writer would prefer a date two or three centuries earlier for Menes). Also it is undeniable that Manium is a common Semitic name, and might belong to any king of Syria or Palestine. Māgan, "place of ships," "land to which ships went," might be Egypt, it is true; the Babylonians certainly went there by sea; and in later days the land of Melukhkha, which is always mentioned with Māgan in later inscriptions, was probably Ethiopia. But at present it is safer to suppose that Māgan

¹ L. ALBRIGHT, in *Journal*, VI, 89.

was the Sinaitic peninsula or more probably the Arabian coast of the Red Sea, and that Manium was a king of those parts whom the Babylonian conqueror overthrew on one of his western razzias in search of stone for his buildings. In any case, Babylonian culture from the first dominated western Asia, and in the time of Akhenaten we find the Babylonian language and writing in general use in Syria and Palestine; any native culture of previous independent origin was practically absorbed.

But beyond the "river of Egypt" the Babylonian writ never ran. Egypt pursued her own course, undisturbed by the conquests of Sumerians and Semites, till the invasion of the Hyksos, driven forward by the pressure of the northern Indo-Europeans pushing south into Syria, overthrew her ancient polity, and for the first time, so far as we know, Semitic foreigners assumed the diadem of the Egyptian Pharaohs. That the Hyksos kings were Semites we know by their names, and no doubt the majority of their followers were Canaanites, but it is not impossible that there were Hittite and other non-Semitic elements in their following. The Amarna tablets have revealed to us the fact that in Akhenaten's days a number of the chieftains, even in Southern Palestine, bore Aryan appellations, such as Shuyardata (Sūrya-dāta, "the Sun-given," 'Ἡλιοδοτος)¹ and Yazdata (Yazd-dāta)². Further north, in the region of the Khabūr, we know from the same source of information that the state of Mitanni was ruled by a kingly house and aristocracy of Aryan origin, though the people itself (*Kharri*) was neither Aryan nor Semitic. The Mitannian chiefs (according to Professor Winckler's interpretation of a tablet found by him at Boghaz-keni) venerated the gods Indra, Mitra, Varūna and the Nasātya-twins (Aśvins)³. They were to all intents and purposes Indian Aryans. Now, further east, in the twentieth century, six hundred years before, the Kassites had conquered Mesopotamia, coming from across the Zagros. They too seem to have been possibly Indo-Europeans, judging from the facts that they are supposed to have called the sun *suryash* and that their word for "god" was *bugash* (= bhāga, Βαγαιος, βορις)⁴. Then we undoubtedly know that about 1950 B.C. Indo-Europeans had invaded Western Asia, and in the time of Akhenaten (c. 1350 B.C.), we find them still a distinct element in the population. The view is inevitable that the Hyksos invasion of Egypt (which must have taken place about 1800 B.C.) was a consequence of this foreign influx.

We seem now to have got a fifth culture-element, the Aryan, in Akhenaten's world; but this is hardly the fact, since these Aryans of Syria and Mesopotamia were never a separate nation, but formed nearly a ruling aristocracy, which itself by Akhenaten's time had no doubt largely adopted the gods and customs of the Semites, while retaining their own "for official purposes" only. The Kassites soon became entirely babylonized, the kings only retaining their characteristic non-Semitic names.

What influence these Aryan invaders may have had upon the Hittites we do not know. It has hitherto been supposed that the *Khatti* were a native Anatolian population, neither Semitic nor Aryan, and probably most nearly akin to the Minoan Greeks. But if the results of the recent researches of Professor Hrozný⁵ are accepted, and the Hittites wrote in cuneiform a West-Aryan tongue, akin indeed to Latin, we are faced with another Indo-European strain, this time of western, not eastern origin, coming doubtless to Asia by way of the Balkans, not, as the Kassites and Mitannians probably came, through Turkestan. In

¹ HALL, in *Proc. Soc. Bibl. Arch.*, xxxi, 234.

² WEBER, in KNUPTZON, *Amarna-Tafeln*, 1309.

³ MEYER in *Sitzb. K. preuss. Akad.* 1907; HALL in *Journ. Hell. Stud.*, xxix.

⁴ HALL, *Ancient History of the Near East* (1920), p. 201.

⁵ *Die Sprache der Hethiter* (1917)

Journ. of Egypt. Arch. vii.

any case we again see the Aryan pressing south, but from another direction. But we can hardly think that the characteristic hieroglyphic writing of the Hittites was of Aryan origin. We see no trace of any particular characteristic culture brought into Western Asia by these Aryans, and it is more probable that the language of the hieroglyphs will turn out to be the native pre-Aryan idiom of Anatolia, whatever the language written in cuneiform may be. Nevertheless, the Italian connexion of this language, if proved, gives us much food for thought in connexion with the traditional relationship, borne out by archaeological comparisons¹, between the Hittites and the Etruscans. What if Etruscan should turn out after all to be Indo-European?

Into the Greek peninsula the Aryan Greek had probably not yet penetrated: at any rate we find as yet no direct proof of his existence there in Akhenaten's time.

The Aryan invasion was then but a transitory phenomenon. The invaders could not found a national civilization as they did in India or in Greece by amalgamating with the native population but keeping their own language dominant. In Western Asia they probably finally disappeared not long after the days of Akhenaten.

We have then in his time still the four great systems of culture, existing alongside each other, but now, as had not been the case in the days before the coming of the Aryans, connected with one another by close communications and constant ties. It must not be supposed that in the old days the one had never impinged on the other. That was not the case: Egypt for instance had relations with the Phoenician coast and the Lebanon district from time immemorial, and Greece with Egypt certainly as early as the time of the Sixth Dynasty (Third Early Minoan period), if not far earlier. But now it was not a case of precarious communications, often suspended. Akhenaten lived in a world of states as closely linked up as those of modern Europe; kings corresponded with kings and princes with governors; diplomats intrigued against one another and pompously concluded treaties meant only to be broken when it suited the interest of one or both of the parties to them; militarists schemed the conquest of weaker neighbours; imperialists planned to perpetuate their rule of peoples that did not want it, often, it must be confessed, justly enough in their own interests. Akhenaten himself, as king of Egypt, ruled a country that did not belong to his own Egyptian civilization at all: namely Babylonian Palestine and Syria. He ruled it quite justly and legally as the inheritor of a title that his forebears had won by the sword, when the reaction of Egypt against the Hyksos drove out the hated Semitic invaders, and patriotic revenge had in turn fixed the yoke of the erstwhile conquered on the necks of their former enslavers and the insolent insulters of their gods. His father Amenophis III was recognized by the whole world as the rightful ruler of Syria south of the dominion of Mitanni and west of that of the Babylonian Kassites. Akhenaten would have been perfectly justified in maintaining his legal right against insurrection. And he did so, in words. In fact, he abandoned it, and the reason was not mere indolence, but, apparently, a conscientious pacificism, a new phenomenon in the history of human thought. Akhenaten was an artist and a philosopher, who lived or aspired to live *au dessus du combat*, on a plane higher than that of the contending forces of his world. If we can hardly call him, as Professor Breasted

¹ Such as the common use of the *lituus* or curved wand and of the round skull-cap by the priests, and the identity in form of the figure-of-eight shield (shaped like an 8) used by the Hittites (as well as by the Minoans) and the Roman sacred shields or *ancilia*. Mr Forsdyke has pointed out to me the identity of the Minoan shields with the *ancilia*, and I can add a Hittite parallel on the relief figured by me in *Ancient History of the Near East*, Pl. XXIII (from Sinjirli).

does, "the first individual in history," we can certainly call him the first original genius in matters of speculation that we know. And like many geniuses, the youth was both a crank and a prig. But one with some engaging characteristics, nevertheless. The way in which in the sculptures of the tombs at Amarna he is constantly depicted enjoying his family life with his sister-queen and his evidently dearly loved little daughters, is most human. There is nothing of the inhuman prig and doctrinaire here. Yet this young man, whom we may believe to have been animated by the purest and most elevated motives, succeeded by his obstinate doctrinaire love of peace in causing far more misery in his world than half-a-dozen elderly militarists could have done. It is the usual tragedy of such men as he, the usual catastrophe when a philosopher rules, whether his philosophy takes the form of pacificism or any other doctrine. We can hardly doubt that Syria and Palestine were far happier under the *pax aegyptia* of Amenophis III than during the lawless chaos which was allowed to supervene by the well-meant inaction of his son.

Akhenaten's best wish for the rest of the world was that it should go its own way while he pursued his life devoted to his family and his "doctrine" of Aten-worship undisturbed. The results we know from the Amarna tablets. He founded his city of Akhetaten as a sort of non-migratory Laputa, where he and his philosophers and artists and courtiers, whether believers in the Aten or not, could live happily together in mutual love and trust, letting the rest of the world go where it would. One wonders how many of these "disciples" really believed in the young king's fads, and how many of them honoured the Aten with slyly winking eye and tongue in cheek. Such usually outnumber the others in similar cases. But some there were who certainly were believers, or the religion of the Aten would not have survived for even the short time that it did.

One must not suppose that the "doctrine," the "king's teaching," as it was called, was entirely the invention of Akhenaten. It was a development of Heliopolitan belief, the "wisdom of the Egyptians" that Moses learnt at On, that had gradually been coming to the front since the time of Tuthmosis III in opposition to the all-embracing claims of the Imperial Theban Amūn to worship, honour and the material wealth derived from the conquered lands. And it was well to the fore in the time of Amenophis III, who certainly favoured it. His son believed in it to the exclusion of all other religious belief, and not content with this attempted to make his subjects believe in it exclusively too and tried to abolish the whole pantheon by decree, chiselling out the names of the gods from the monuments (more especially that of Amūn), and compelling everybody to be a monotheist. The attempt failed of course, and the monotheism of the Aten remained an abortive phenomenon in the land of its birth.

It is however by no means impossible that its inspiration was not lost outside Egypt. In Nubia, where temples were erected to the Aten, it died; but in Palestine we cannot be certain that this was absolutely the case. Even in the midst of rebellion, a Palestinian *Khinatuni* seems to have been set up, as would naturally be expected from Egyptian officialism in the northern as in the southern external dominion; this would be entirely agreeable to the king: he would not fight, but he would teach. How do we know that the monotheistic doctrine of Heliopolis (again, Moses' "Wisdom of the Egyptians," learnt at On) did not survive at Khinatuni, whether that was at Jerusalem itself or possibly at Bethshemesh, "the House of the Sun," and that it was not the germ from which sprang the monotheism of the Hebrews, of ourselves, and of the Muslims?

Let it be remembered that Akhenaten did not worship simply the sun-disk alone. It

was the lord of the disk, the unseen One behind it, whose glory shone through the disk and so caused all light and life and joy in the world, that he worshipped and proclaimed to be the sole deity of the universe. This was no doubt the inner doctrine: the common man would venerate the actual Aten, as did the king himself publicly: but behind the Aten was in reality its lord.

The father of Akhenaten, Amenophis III, was a most magnificent oriental Sultan. The warlike enterprises of his forebears had given him at his accession an empire wide-spreading and at peace. He could hunt lions and wild bulls in the Syrian steppe, which was his imperial pleasance. He could make his progresses in state from Egypt to the bounds of Naharen, and none challenged him. The king of Karduniyash (Babylonia) fawned upon him for Nubian gold; the king of Mitanni was proud to call him his son-in-law. Only the king of Khatti, secure beyond the Taurus, dared to treat him coolly. But towards the end of his days the Egyptian peace in Western Asia began to be troubled. The great warriors and statesmen of the older generations, who had served Tuthmosis III and Amenophis II, were now dead. The last of them, the wise vizier Amenhotpe, son of Hapu, followed them to the grave. Amenophis was probably the son of a Mitannian mother, and if so, half an Aryan. To this may partly have been due the peace of the greater part of his reign. The Aryan barons were partly his blood-cousins, and both they and the Egyptians were united by their common dominance over the Semitic inhabitants of the land. To Aryan blood may also perhaps be attributed in part the king's predilection for the doctrine of the Aten, the sun-god who in his plain image of the disk would seem rather than Amen-Rê to be similar to the Aryan Sūrya.

As the king's life drew nearer its end and his hand weakened, the first mutterings of the coming storm were heard in the district of the Lebanon and on the North-Phoenician Coast, the land of Yarimūta¹, where the men of Arvad, who in the days of Tuthmosis had always given trouble to Egypt, conspired with a family of native chiefs of the Lebanon to throw off the yoke. They were encouraged to this course by the intrigues of Shubbiluliuma, the king of Khatti, a sinister figure always in the background of the troubles that ensued, always pulling the strings that were soon to bring the Egyptian empire in Syria to the ground in ruin, and ensure the triumph of his calculated policy in the complete destruction of Mitanni and the division of its territory between himself and the Assyrians, whom he supported in their defiance of the Babylonian king, who claimed to be their overlord, and generally encouraged for his own purposes as a weapon to his hand against his two powerful southern neighbours. While Amenophis yet lived, however, no general revolt was possible, and Egypt remained supreme. But the revolution of Akhenaten played directly into Shubbiluliuma's hands. The Syrian revolters gained ground everywhere. City after city of the Phoenician coast fell into their hands, in spite of the frenzied resistance of those native princes, like Rib-adda of Byblos, whose interests were bound up with those of Egypt. But without Egyptian help Rib-adda could do little. He sent letter after letter to Egypt, imploring Akhenaten to help his tortured subjects and to allow Yankhamu, the viceroy of Yarimūta, to come with his troops. But Yankhamu was kept in Egypt, perhaps out of royal jealousy. No help came. Akhenaten was too busy imposing the "doctrine" on his unwilling subjects and in designing new decorations for the tombs of his faithful followers. The Amorite chief of the Lebanon deceived him woefully with protestations of loyalty; he

¹ Yarimūta is now known not to be the Delta, but the North-Syrian coast, called Yarmūti by the Sumerians two thousand years before.

knew not what to think, and finally, after an explosion of bad temper (after the manner of his irritable kind), gave it up. "You know (he wrote in effect to the Amorite chief who, with his tongue in his cheek, was protesting his loyalty while hounding the unhappy Rib-adda from city to city) that I hate war and I don't want to come killing people in Asia; but if you don't behave nicely I shall really *have* to come and sacrifice you with my own hand!" He never came, of course, to perform this royal duty (part of his official functions as Pharaoh), and the whole of Syria and Palestine became a welter of chaos. The Egyptian officers did not know friend from foe, and attacked the former as often as the latter. Sudanese troops sent to Jerusalem attacked the inhabitants: Abdkhiba the local kinglet begs that the blacks may be withdrawn. Robbing and marauding bands of Beduins (Sutu) wandered over the land, while the tribes of the Khabiri were pushing onward everywhere. The king petulantly expected the tribute formerly sent to Amūn to be remitted now to the coffers of the Aten as if nothing were happening. And he was much more concerned to retrieve certain Amonist fugitives who had fled to Phoenicia from his persecuting intolerance (artist and seer though he was, he was as intolerant as his opponents), than to punish rebels: conformity to his spiritual doctrine was more important in his eyes than conformity to his temporal rule. No sense could be got out of him, and finally he abandoned the whole of his empire, which probably bored him to death. It was much more pleasant to forget the existence of all these bothering Hittites and Amorites and give oneself up wholly to the congenial life of art, philosophy, and petty persecution. When he died, possibly mad, no vestige remained of the empire of Amenophis III, and it was not till forty years later that a warlike monarch of a new dynasty, Sethos I, was able to recover the Egyptian dominion in Palestine. Syria had gone for ever: for all his boasts, the *miles gloriosus* of Egyptian history, Ramesses miscalled "the Great," the son of Sethos, was unable to recover the North, which fell to the Hittites at the expulsion of Egypt, and remained with them till the destruction of their state at the hands of the invading Westerners of the Aegean lands in the days of Ramesses III (c. 1196 B.C.).

We know very little of the actual civilization of Syria and Palestine in Akhenaten's day. To judge from the inscriptions of Tuthmosis III, the Canaanite chiefs of his time must have been highly civilized and wealthy: chariots adorned with gold are mentioned and weapons and horses of price. The war-booty of the reign of Tuthmosis and the exacting tribute of Amūn must have diverted much of this wealth to the coffers of Egypt, and the chaos of Akhenaten's day must have meant a loss of wealth and culture that was not replaced for centuries. Excavations in Palestine have had most disappointing results so far as discovery of works of art and culture are concerned.

Babylon pursued her steady way, dull and uninspired as it was. She worshipped the gods, observed the stars, engraved cylinder-seals, wrote millions of cuneiform tablets, and made money. Too far from Egypt to tempt conquering Pharaohs, also impressive with her old history and her imposing façade of widespreading power, Babylon seems to have kept western invaders at a distance. She had perennial trouble with Elam, with whom her relations much resembled those of England with Scotland during the Middle Ages. But her only great quarrel was with the Assyrians, who were impatient of her yoke, and in the troubles of Akhenaten's reign saw their opportunity to turn, in alliance with the Hittites, a nominal independence into a real one. Asshuruballit the Assyrian king appears as a sort of disciple of Shubbiluliuma, certainly during his equally long reign showing much the same statecraft as his apparent model. Both objected to the existence of Mitanni, and, in the

impotence of Egypt, to which Mitanni was closely bound by alliance and marriage, it was comparatively easy for the two conspirators to bring about her downfall and share her territories between them. Asshurballit thus avenged an old insult which the Assyrians, already a military nation, could ill brook: the sacking of Nineveh by Saushshatar of Mitanni and the carrying off of the gates of the temple of Ishtar to adorn Washukkani, his capital. The Assyrians appear now for the first time in a prominent rôle in history, and we find their warlike propensities already developed: the boy was father to the man. Of Mitanni we hear no more: she perished. One could wish that archaeological discovery would reveal some actual relics of this unexpected Aryan-ruled kingdom beyond a few tablets; one would like to know whether the Mitannians possessed any distinctive culture of their own. But the site of Washukkani is unknown, and we hardly know for certain what the confines of Mitanni were. Hitherto exploration along the course of the Khabûr has been restricted, and what has been discovered is mostly of a much later period than this.

Neither do we know the extent and frontiers of Shubbiluliuma's kingdom. To the east it marched with the land of Kizvadna, then tributary to Khatti, but later (in the time of Sethos I and the Hittite king Mursilis) practically independent under its king Šunaššura¹. In the west the Hittite monuments of Ionia, on the Karabel and Mount Tmolos, give the impression of being memorials of victory; the signs-mannal of a conqueror in a strange land. Yet we do not find many relics of the contemporary Minoan civilization on the Aegean coast of Asia. The Bronze Age "Greeks" did not settle there. There must have been a native culture there that was neither Hittite nor Minoan but perhaps formed a connecting link between the two. For that the Hittite and Minoan cultures were connected, even if remotely, one can hardly doubt. Have we a trace of this missing link in the famous Phaistos Disk, with its enigmatic inscription, stamped with types in a ribbon of signs that winds helically from circumference to centre of a flat circular clay disk², stamped when wet and thereafter baked? This actual specimen is three centuries older, it is true, than our period; but, as Sir Arthur Evans pointed out, it would seem to have come to its place of discovery in Crete from the south-west coast of Asia Minor, and the sign of the warrior's head upon it bears the crest characteristic of the Philistines of Caphtor (Keftiu no doubt extended from Crete to Cilicia) in the later days of Ramesses III and of the Lycians and Karians in the time of Herodotus, eight centuries later still. The house or shrine sign upon it is also completely reminiscent of the peculiar wooden-log architecture of Karia and Lycia, which we find imitated in stone for the houses of the dead in that part of the world in classical times. It is very probable that in Akhenaten's day the people of the coast, from Ionia round to Pisidia, wrote in this way, with a technique of manufacture derived (like that of the Minoan tablets themselves) from Babylonia through the early Semites of Asia Minor who taught the Hittites to use cuneiform, but written in a script and in a method peculiar to this part of the world alone, and symptomatic of a civilization with original characteristics, could we but discover them.

South-east of the Hittites were the undefined land of Mitanni and debatable territories such as Isuwa, and the semi-independent Hittite settlements in North Syria, such as Carchemish, the ancient city now under the rule of a Hittite (?) sub-king named Biyaššiliš³,

¹ WEIDNER, *M.D.O.G.*, 58 (Aug. 1917), p. 59. The name Kizvadna may be the same as the *Kataonia* of classical times.

² EVANS, *Scripta Minoa*, 287.

³ WEIDNER, *l.c.* It is *prima facie* probable that he was a Hittite, and his name is either Hittite or Mitannian with the Hittite nominative termination.

To the south, on the shore of the Mediterranean, was Cilicia, where we are now beginning to suspect the existence of a culture possibly less original than that which produced the Phaistos Disk, but still with characteristic peculiarities. Various objects of art, found in deposits of this period both in Cyprus and in Egypt, that have hitherto been indiscriminately classed as "Mycenaean" are probably to be assigned to Cilicia¹, which probably comprised the lands of Arzawa and Alashiya of the Amarna tablets (the identification of Alashiya with Cyprus will hardly hold water), and may have been included by the Egyptians in the name Keftiu, though the Islesmen and men of Keftiu depicted in the tombs of Rekhmirê and Sennemut at Thebes are distinctly Minoan Cretans and no others. Their dress, even to the details of the hairdressing, is proof positive of this. We have as yet no knowledge that the Cilicians (or Alashians, if they were Cilicians) wore the characteristic Minoan waistcoat and the long hair to the waist with the extraordinary curls and knots on the top of the head that the Cretan dandies affected and that evidently struck the attention of the Egyptian artist who so carefully reproduced them. That the patterns of the waistcoats in question do not seem specially Minoan may be due to a minor Egyptian inaccuracy: the crucial test is the coiffure—and the characteristic Minoan wasp-waist².

What the Cilicians looked like then, since we cannot accept Rekhmirê's Keftians as Cilicians or as any other than Minoan Cretans, we do not know. In the art which may be provisionally and hypothetically assigned to them we see a *Mischkunst* of Syrian (Babylonian), Hittite, and Minoan origin, with a certain characteristic "feeling" that serves to identify it. We see it in the Arimaspean fighting the griffon on the ivory mirror-handle from Enkomi³, in a strange carved wooden object from Egypt in the Berlin Museum from the tomb of the foreigner Sarobina at Memphis with its griffon, deer, goat, and lion among palm-trees⁴, and probably in the extraordinary little group of a bull attacked by a lion, cut in red jasper to act as the lid of a vase, which, though not often noticed, is one of the most interesting examples of the art of this period in the British Museum⁵. It was found at Amarna with the tablets of the royal cuneiform archive, and so is preserved in the Egyptian Department. But it is not purely Babylonian, nor is it at all Egyptian. Nor, as we can see now, is it Minoan; though twenty years ago, when I first published it, its freedom and originality of treatment and an undoubted Minoan-seeming quality about it led me to claim it tentatively as "Mycenaean." Nor is it Hittite. But to me now it appears to have just the intangible "feeling" that classes it with the two other objects I have mentioned and with others as probably Cilician. There is just that kinship to Minoan art on the one side and to Syro-Babylonian on the other that we should claim for a Cilician work.

The Cilicians, at this period at any rate, wrote their language in cuneiform characters on clay tablets just as the Mitannians and Hittites did also. We know nothing yet of any script of their own, but since the Hittites used a hieroglyphic writing as well as cuneiform, the Cilicians may also have done so. The names of the chiefs of Arzawa, Tarkhundaraush for example, are distinctly of Hittite type. This particular name perhaps contains the god (?)—name Tarku, always characteristic of this part of the world (e.g. Tarḫutimme, and later Tarkondemos and Trokombigremis in Roman days), and doubtless related to the Etruscan

¹ HALL in *Manchester Egyptian and Oriental Journal*, 1913, 41 foll.

² HALL, *Ancient History of the Near East*, 293; *Aegean Archaeology*, 58.

³ HALL, *Aegean Archaeology*, 202, Fig. 80.

⁴ HALL, *Oldest Civilization of Greece*, 188, Fig. 55.

⁵ HALL, *op. cit.*, 304-5, Figs. 70, 71.

Tarqu-inius. And the name of the Alashiyan queen Hatiba, known to us from the report of Wenamūn, the ambassador of Ramesses XI, about 1100 B.C., is also of distinctly Hittite type. That the Cilicians were closely related to the Khatti seems very probable. Owing to their position on the coast they were probably more highly civilized than their upland relatives.

It would appear that though Hittite as well as Iranian chieftains had early established themselves here and there in Syria and Palestine, as at Carchemish, the Hittites in bulk were still on the other side of the Taurus, and appeared in force south of it only as conquerors from time to time, as they had since their first great raid on Mesopotamia which reached Babylon and destroyed its dynasty *circa* 1925 B.C.

Five hundred years later then we find the Khatti still mainly a people of Anatolia, where they had to a large extent probably displaced the Semitic population that we find between Halys and Taurus, and specially in the Argæus region, as early as 2500 B.C. The idea that the Semite never crossed the Taurus must now be given up.

Bogház-keni, the centre of the Hittite kingdom, the later Pterion, was no doubt the capital of Shubbiluliuma, and here the phenomenally good luck that attended Prof. Winckler's excavation of one of the ancient buildings revealed to him a *cache* of cuneiform tablets hardly second to that of Amarna in importance, and of the same date and referring to many of the same actors in the world-drama of the time. It is these that have made clear to us the action of Shubbiluliuma himself in the drama. And now Prof. Hrozný in his examination of Winckler's tablets has restored to us the names of several of the predecessors of "the Hittite Bismarck" on the throne of Khatti. Khattusil his father is really the second of the name, and the names of Khuzziyash and Telibinush are new to us¹. The last appears to have been a monarch of importance. Of Prof. Hrozný's discovery that the tablets from Bogház-keni written in Hittite (some are in Babylonian) are in a West Indo-European tongue akin to Latin we have already spoken. It should be said that the learned Bohemian professor's conclusions as to the Aryan character of the language are not yet universally accepted²; but it must be noted that he is a well-known and thoroughly competent cuneiform scholar and his transcriptions cannot be doubted. It should not, therefore, be long before we are able to make up our minds one way or the other as to the linguistic affinities of Hittite.

I have never been an advocate of an Indo-European origin for the Hittites, which has been claimed already by others before Hrozný. It has always seemed more probable that this people of distinctly orientalizing culture, with the characteristic religion of Anatolia that persisted in classical days and seems first cousin to the cults of Canaan and of Minoan Crete, was non-Aryan. But if Prof. Hrozný proves to be right, this preconception must go by the board, and one must radically revise one's ideas³.

We can make out the sense of the Hittite tablets more or less, in spite of the fact that it is not certain what kind of language they are written in. This may be a hard saying to the ignorant, but those who are acquainted with the mysteries of the cuneiform writing will know well enough what I mean, and those who have some knowledge of Chinese or still better of the Japanese script with its mixture of Chinese ideograms and native Japanese signs of different kinds, will understand. We are helped by the fact that Babylonian Semitic

¹ HROZNÝ in *Hethitische Studien, Hethitische Keilschrifttexte* (1919).

² E.g. by COWLEY, *The Hittites* (Schweich Lectures for 1918), v.

³ *English Historical Review*, Jan. 1921, 100.

locutions of all kinds were lifted bodily into this Hittite written speech, much as Chinese expressions are used in written Japanese.

There is little doubt that the Hittites got their knowledge of cuneiform from the early Semitic colonies in Anatolia which they conquered and either absorbed or expelled. They used it in addition to the more clumsy hieroglyphic script of their own which they possessed. It has lately been argued¹ that because most of the extant monuments of the hieroglyphic script are probably rather late (those at Carchemish being perhaps as late as the tenth or ninth centuries B.C.), and because no similar inscribed monuments have been found at Boghâz-keui or Euyûk, the Hittites invented or adopted the hieroglyphic script *after* they were already acquainted with cuneiform. But an argument of this kind is very dangerous: it may be upset at any moment by a discovery of hieroglyphs leaving no room for doubt whatever as to their early date; and it is still more dangerous when, as in this case, it conflicts with all probability. Is it likely that a people acquainted with the developed and conventionalized cuneiform script would deliberately adopt a clumsy system of pictorial hieroglyphs having no relation whatever to the writing they had used for centuries? No: we can hardly suppose that these Hittite hieroglyphs, so characteristically Hittite in their artistic peculiarities, are not the national writing of the Anatolians. In older days they may, like the Minoans, perhaps not have had the idea of inscribing their hieroglyphs on walls. The Minoans never did so, so far as we know. The idea of mural inscription was very probably borrowed from the Assyrians, and so appears late. The Hittites of Akhenaten's day, when they used hieroglyphs, may have painted them on skins, as the Aztecs did². And in the climate of Anatolia all such records will long ago have perished. Still, one need not despair of finding one in Egypt one of these days. Ordinarily, they wrote in cuneiform.

The peculiar characteristics of Hittite art have been known to all of us for many years, largely through the special attention which it received at the hands of MM. Perrot and Chipiez. We probably have actual specimens of the work of Shubbiluliuma's day in the door-figures at Boghâz-keui (one of which has with little justification been taken to be a woman, an Amazon!) and the religious processions and deities of Yasili Kayâ.

From the Anatolian mainland we pass to the island of Cyprus. Cyprus itself, set in the midst of the sea, had recently been the scene of invasion and revolution. The native population, no doubt closely related in origin to the prae-Semitic inhabitants of Palestine on the one side and to the Aegeans on the other, had pursued the even tenour of their culture-development, always (characteristically) a stage behind the rest of the world (and this in spite of the attraction which their copper must from early times have been to commerce from over seas), until, probably early in the fifteenth century B.C., they were invaded and overrun by Cretan conquerors, who brought with them their civilization and art, and established a Minoan kingdom in Cyprus, the relics of which were discovered at Enkomi in 1894, and are now among the chief treasures of the British Museum. Among these relics were many articles imported from Egypt, including both jewellery and ceramic of the finest kinds. And Egyptian scarabs found with them bore the names of Amenophis III and Teie³. These two were not later "re-publications" of royal scarabs of this kind, not Saite re-issues. The name of Amenophis himself occurs on Twenty-sixth Dynasty scarabs, because he was venerated then, by confusion with the deified Amenophis I and his own vizier

¹ COWLEY, *op. cit.*, 38.

² See *English Historical Review*, loc. cit.

³ EVANS in *Journ. Anthropol. Inst.* xxx (1900). On the whole find see POUlsen in *Jhb. Arch. Inst.* 1911, 215 foll.

Amenhotpe son of Hapu. But that of Teie never occurs: she was as forgotten then as was her heretic son. And by their types we know them to be characteristic scarabs of the Eighteenth Dynasty. There is no need to insist on this now, when the erstwhile question of the date of the "Mycenaean" period is no longer in debate; but twenty years ago it was amusing to see how some people tried by all means to avoid the dreadful conclusion that there was anything in Greece older than the year 776 B.C., how they twisted and wriggled in their vain endeavour to escape from the pitiless archaeological net that was being woven around them by discovery after discovery all pointing in the same direction of the fifteenth century B.C., and how they finally succumbed to the evidence of the facts.

In Akhenaten's day, then, Cyprus was the seat of a flourishing Mycenaean kingdom which evidently was in pretty close relations with Egypt. We have doubtless relics of traffic with Cyprus in the shape of many of the fragments of Mycenaean pottery found at Amarna, some of which was probably made in Cyprus, while some is of types associated with the mainland of Greece. There is little trace of direct connexion with Crete. In Akhenaten's time indeed the Minoan power had passed its zenith. The destruction of the palace of Knossos had occurred, and the kingdom of Minos probably had come to its end. Whether the colonization of Cyprus was a result of this catastrophe we do not know. But it seems more probable that the Cyprian Minoans came from mainland Greece than that they were dispossessed Cretans. Their pottery has much more of the mainland character than the Cretan. And this would agree with the legends of the mixed Arcadian and other origins of the Cypriotes. But, if not the direct result of the destruction of Knossos, the colonization of Cyprus was connected with it, since it was doubtless the final result of the movement from the mainland that incidentally destroyed Knossos and the thalassocracy of Crete.

The speedy collapse of Cretan culture and art after the destruction of the Labyrinth is remarkable, and we have not as yet sufficient data to explain it satisfactorily. Anyhow, the sceptre had passed from the mother-island to the colonies which she had established aforetime on the Greek mainland, to Mycenae and the rest, and from them came the impulse that took Minoan-Mycenaean culture to Rhodes and finally brought up in Cyprus. In the days of Hatshepsut and Sennemut, of Tuthmosis III and of Rekhmirê, the Minoans who brought their masterpieces of toreutic and of ceramic art to Egypt were Cretans of Knossos and Phaistos and no others, "the men of Keftiu and of the Isles in the midst of the sea." In the time of Akhenaten their place was taken by mainlanders of Mycenae, by Rhodians of Ialysos, and Cyprians of Enkomi. The period was that of the Aegean Bronze Age known to us as the "Third Late Minoan" (L. M. III), or newly by the appellation of "Third Late Helladic" (L. H. III), the term "Helladic" being considered more appropriate to a period whose centre of gravity was in Hellas proper, while "Minoan" is considered appropriate only to the Cretan post-Knossian culture. The convenient term "Late Minoan III," however, will probably survive as a name for the period, while the somewhat old-fashioned word "Mycenaean" has much to be said for it as a general term for the art and culture of this time. It must not, however, be forgotten in this connexion that the shaft-graves of Mycenae, with their magnificent contents, are considerably older than this period, being contemporary with the Cretan period L. M. I, which equates with the early Eighteenth Dynasty in Egypt and dates about 1600-1450 B.C. In Akhenaten's time the glory of these Perseid princes (or whoever they were), who were buried in the shaft-graves, had passed away; but Mycenae was still the seat of royal state, and now that the Minoan power

had vanished, was probably one of the most important centres of civilization in Greece. The princes of this time, the age of Akhenaten, may perhaps have been the house known to later legend as that of Atreus, so famous in tragic story. It is not yet certain whether the great *Tholos*-tombs below the citadel at Mycenae, the tombs of Atreus and Klytæmnestra, as they are called, are really to be assigned to this period and Dynasty, or are older¹.

We may hope that our new excavations at Amarna will reveal new evidence that shall make clearer the relations between the Greece of the age of the Atridae, when "golden Mycenae" ruled, and Egypt. It is very probable that there was a considerable colony of Greeks in Egypt at the time²; and far from improbable that their artists exercised some influence over their Egyptian *confrères*, so that when Akhenaten gave the word for the throwing off of the fetters of convention, it is no wonder that the resulting work shews occasional Minoan touches which had the era of freedom lasted would no doubt have been accentuated. It is, however, the fact that this influence was by no means so great as might have been expected; and the fantastic side of Minoan art never seems to have appealed even to Akhenaten's artists³.

Of the Italians at this date we know nothing but the types of their weapons. The Egyptians knew little of them. The Shardinians mercenaries, if they were really Sardinians, were Italians; and they already took part in the fighting in Palestine as Egyptian hirelings, like the Shekhlal or Sagalassians (?) of Pisidia, who are also mentioned in the Amarna letters⁴. But it is not really certain that the Shardinians were Italians at all; they are much more likely to have been a people of Asia Minor (*cf.* the name of Sardis), and as depicted on the Egyptian monuments they carry exactly the same corselet, huge round shield, and great broad sword, as the warriors (such as the Arimasp slaying the griffon) on the ivory mirror-handle from Enkomi, to which we have seen reason to assign a Cilician origin. The Tursha, however, also already known in Egypt, no doubt were Tu(r)sci, Tyrrhenians, and so

¹ The question has been again raised by the recent excavation of Mr J. E. Wace and the British School at Athens at Mycenae, and is still *sub judice*. But one must admit that *prima facie* one would refer such buildings as the "treasuries" of Atreus at Mycenae and of Minyas at Orchomenos to the early late Minoan period rather than "L.M. III."

² We find such foreign colonies in Egypt in this age. That at Gurob, of the time of Tuthmosis III, is a case in point. And the products of Greece were freely imported into Egypt, for the use of Egyptians as well as of the foreigners themselves. Thus hardly any decent burial of the XVIIIth Dynasty is without its *bügelkanne* or Mycenaean false-necked vase, no doubt when originally imported containing olive oil or some other Greek product. And we find the *bügelkanne* and the older "filler" vase imitated by the Egyptian in his characteristic blue faience (Hall, *Oldest Civilization of Greece*, 52, 53), so that they became domiciled in Egypt, so to speak.

³ *Journal*, i, 202. I have often been censured for speaking of the inhabitants of Greece in Minoan days as "Greeks," and am told that they were not Greeks at all, but non-Aryan Mediterraneans. That they were not Aryans has always been my thesis, but it does not debar me from calling them Greeks, since they lived in Greece, and (it must not be forgotten) the classical Greeks were very largely of the old Mediterranean blood, and in the predominantly Aryan Greek language that evolved after the arrival of the Indo-Europeans there is undoubtedly a very large non-Aryan vocabulary, though the structure of the language and much of its vocabulary is Aryan. The Bengalis talk an Aryan language, but none would say that they are Aryan in blood. The classical Greeks were a half-Aryan people that talked a predominantly Aryan language. If they are Greeks, why not their non-Aryan ancestors too, the original inhabitants of Greece? My own practice is to restrict the term "Hellenes" to the classical Greeks, while using "Greeks" for the Bronze Age people as well as for their partial descendants.

⁴ HALL in *Proc. Soc. Bibl. Arch.*, XXXI, 231.

probably were Italians, though, again, we do not know for certain that in the fifteenth century B.C. had yet occurred the traditional migration of the Etruscans from Anatolia which is so strangely confirmed by the similarities of Etruscan art and culture to that of the Hittites. Italy therefore may still have remained a *terra incognita* to the Egyptians, and Italians *rarae aves*.

When we pass south over the Libyan Sea, turning our backs on the havens of Greece and on the stark mountain-wall of Crete, we come to the land of steppe afterwards rich in fleeces, and of stone, later useful for quarrying, which the Egyptians knew as Themeh and the later Greeks as Libya. It had early traditional connexions with Greece, and the Egyptians even under the Sixth Dynasty (c. B.C. 2700) do not speak of its people as if they were absolute barbarians. We know little, however, of its early culture; and in Akhenaten's day it was what it had been for centuries, a mere raiding-field for Egyptian slave-razzias. The time had not yet come for the Libyan upheavals that were to use Egypt so hardly in the days of Meneptah and Ramesses III, and, in alliance with the sea-pirates of the isles swarming over the ruins of the old power of Crete, for a moment to threaten a return of a foreign domination to the land. Yet it has been noticed by Prof. Newberry that during a great part of the Eighteenth Dynasty the ancient cities of the north-western Delta are hardly ever mentioned in the inscriptions, which looks as if during the Hyksos period Libyan tribes had overrun the marshes of the western Delta and had entered into a prolonged occupation of what had been Egyptian territory, being tolerated there by the Theban kings of the Eighteenth Dynasty, who took little interest in the Delta, the North that was so closely identified with the Hyksos and was so deeply soiled with foreign blood, Libyan, Mediterranean, and Semitic. When, after Haremhab had restored the state when the mad episode of Akhenaten was over, the Nineteenth Dynasty ascended the throne, matters were different. The new royal house was of northern origin, and its home was in the district of Tanis and Pelusium, which became the chief seat of the court. So it may be imagined that the north-western Delta was now reclaimed for its ancient owners, and this fact may very likely account for the revolt and attack of the Libyans under Meneptah; the dispossessed Libyans waited till the fear of Ramesses II was stilled by his death, and then, when the throne was occupied by the weak and elderly man, his son, they struck. In spite of their defeat, the north-western nomes remained predominantly Libyan in blood. But the Egyptian authority and religious cults were restored there, and the people became egyptianized.

Haremhab had governed the North for Akhenaten during the Palestinian troubles loyally, though he was not an Atenist, apparently; and, when the generation of fainéant Amarnaites that followed Akhenaten on the throne was expended, he was the only possible candidate for the throne. By him "law and order" in church as well as state were restored; the episode of the heretic Akhenaten and his aesthetes was solemnly anathematized with bell, book, and candle, and after a deal of hard words about "that criminal of Akhetaten," society settled down again on traditional lines and worshipped Amen-Rê in a proper and decent manner. But all originality had abandoned Egypt with Akhenaten; and she became soon a mere museum of doddering priests and mummies and remained so, under the rule of Libyans or Ethiopians, till the artificial renaissance of the Saïtes endeavoured to rejuvenate her, but without originality or real inspiration. Saïte art could baldly imitate the very ancient or it could be pretty and graceful; it could not be really fine, though it must be admitted that success was achieved in the remarkable series of portrait-heads of elderly men (such as Montemhêt the governor of Thebes under Tirhakah) that this period has

left. The greatness of Ptolemaic Egypt was the greatness of Greek Alexandria, not of Egypt. The only Ptolemaic art of any value was Greek; Egyptian art died with the Saïtes.

The experiment of Akhenaten was never repeated. He was the product of his peculiar circumstances, and these circumstances, the philosophical religious speculations of the priests of On, the probable religious laxity and eclecticism of his half-foreign father, his own doctrinaire conceit and the conscientious pacificism that handed over Palestine and Syria to chaos and misery and the rule of his intriguing Hittite enemy, we have seen in this survey of the relation of Egypt with the external world during his reign.

ADDITIONAL NOTE.

As regards the Amonist fugitives mentioned on p. 45, l. 14, see HALL, *Ancient History of the Near East*, 350. The names of these people, supposed by Weber (in KNUDZON, *Amarua-Tafeln*, 1268, n) to be Mitannian, are evidently in many cases Egyptian. Tuya, Leia, Vishiari, Mania, Pâlûma and Nimmakhê all look Egyptian; Tuya, Leia and Mania are easily explicable as the Egyptian names Tuye (Tui), Leie (Rui) and Meni; and Nimmakhê is a perfect transcription of Nebemhêt, as that name was pronounced (probably as Nibmahê) under the Eighteenth Dynasty.

EL-KÂB AND THE GREAT WALL

By SOMERS CLARKE, F.S.A.

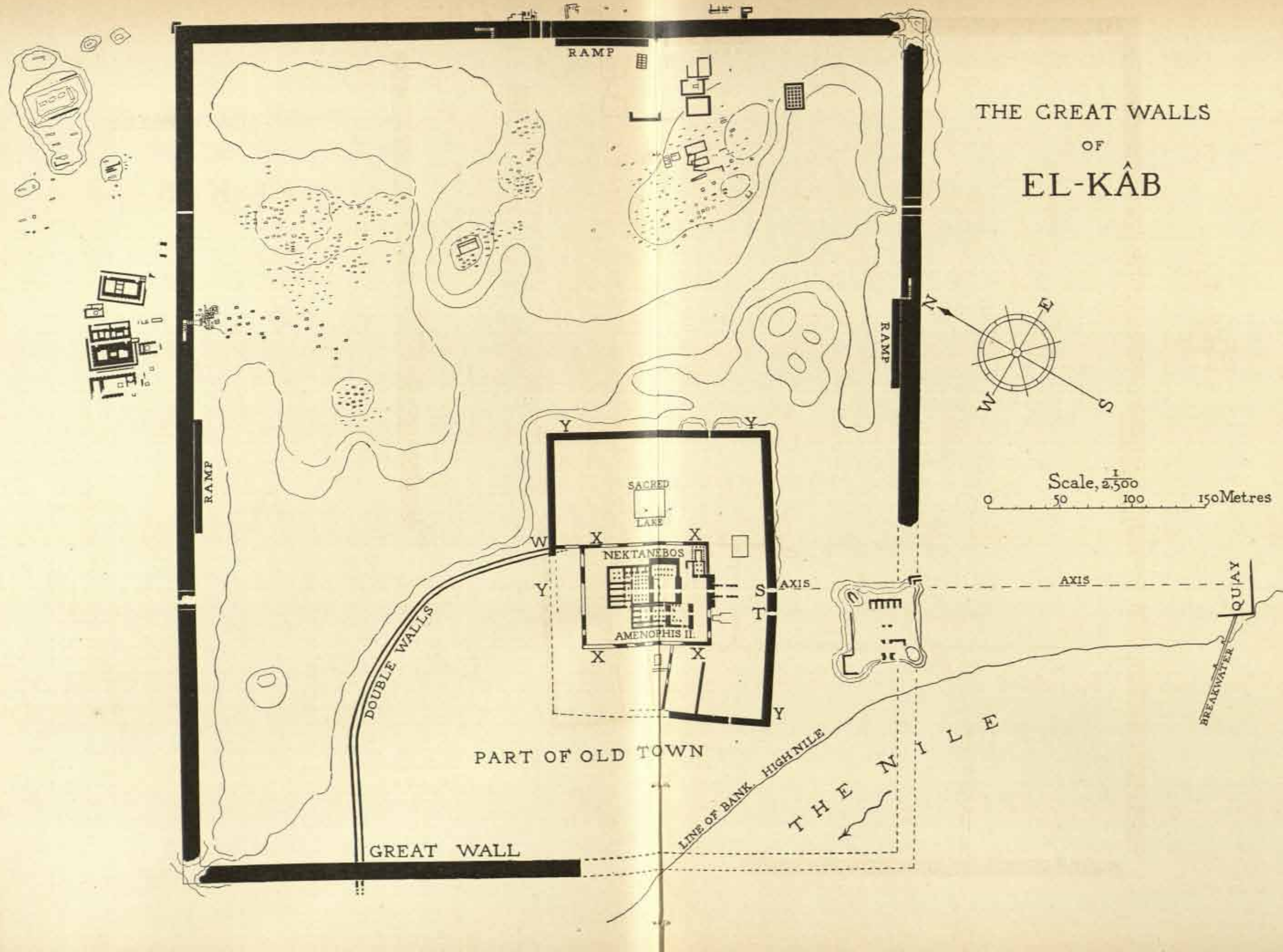
1. INTRODUCTION.

THE geographical position of the two places known in our time as El-Kâb, on the east side of the Nile, and El-Kôm el-Aḥmar, on its western side, is not without interest. It is not often that places acquire importance in their country unless the sites on which they stand offer advantages either strategical or commercial; though in some cases a sacred site may gather around itself a very considerable population and develop into a well-known city. We may enquire what were the reasons for the ancient development of El-Kâb and El-Kôm el-Aḥmar in the positions in which we find them? The position of Memphis at the junction of the Nile Valley with the Delta can be accounted for, and the strategic position of Aswân and Elephantine in connection with the First Cataract, or of Bûhen in connection with the Second, can equally be accounted for; the founders of those places selected their respective positions because the advantages of the sites for their own purposes were clearly recognized. But what advantages are offered by a site such as that of El-Kôm el-Aḥmar? Does it stand at the end of a road of particular importance? The best roads from the Oasis of Khargah, which lies one hundred miles to the west of it, touch the Nile elsewhere. Minerals are not known in the western desert, nor are there any strongly marked headlands or points of outlook near the spot. El-Kâb, on the other hand, is more likely to have attracted attention as a defensible place. The craggy sandstone hills advance close to the east bank of the Nile both above and below the site, which stands, as it were, in the centre of a fairly wide bay. From many points an outlook could be maintained, and indeed has been maintained. A large valley has its outlet east of the site, and through this came a road from the gold mines in the Arabian chain of mountains.

Some historians are of opinion that El-Kôm el-Aḥmar was the capital town of kings ruling Upper Egypt only. If these kings were buried at Abydos, as is affirmed, the distance between that place and El-Kôm el-Aḥmar indicates that they held a considerable strip of the country. But in that case how very near to the southern edge of their country they placed their capital town! Next, Menes comes upon the scene uniting Upper and Lower Egypt and establishing his capital at Memphis; El-Kôm el-Aḥmar must then have necessarily taken a secondary place. Possibly it was the position of El-Kâb, well placed to gain the advantages of commerce, that enabled it to advance whilst its opposite neighbour remained stationary or even dwindled; for such was evidently the case.

The configuration of the hills enclosing the Nile Valley can have changed hardly at all from very early historical times, but on the other hand the river and its banks have certainly changed a good deal. The level of average High Nile must, in the early times of El-Kâb, have been at least three metres lower than it is now. The full Nile is now but little below the level of the cultivated ground, but in its early youth the town must have stood well above the flood waters.

THE GREAT WALLS
OF
EL-KÂB



We have clear evidence that from before the Twenty-sixth Dynasty the river was eating its way eastward. What was the position of the river-edge on the western side of the Nile we cannot tell, but considerable changes have taken place there recently. A valued old servant, a sailor all his life long, told me that he remembered when the boats came up close to some villages on the west bank which are now separated from the river by fields and a canal. Whether there was then an island, which seems probable, he could not recall. There is now a considerable island a little to the south¹.

Whilst El-Kôm el-Aḥmar stands quite away from the Nile and touches the desert on its western side El-Kâb has the advantage of standing upon the river-bank. The patient industry of Mr F. W. Green has revealed to us the high antiquity of the former site². It may be observed (see Pl. LXXII of Mr Green's account) that the sanctuaries of the temple bear a definite relation to the revetted sand-mound over which the structure was built. There is ample evidence of a continuous influence of the holy place from times extremely remote. The Nubian sandstone, miserable building material as it is, is found in considerable quantities on the east bank of the Nile, and was made use of for building the temples at El-Kâb. On the west bank such stone as exists is altogether too bad for serious masonry work. The temple at El-Kôm el-Aḥmar was, it would seem, except for its columns and a few other parts, built of brick. From this we may make the deduction that, after quite the early period, it was a rather insignificant place. Why could not stone have been brought from the east side, or even from Gebel Silsilah, which is not far off? There are to be found in Egypt sundry examples of stone buildings standing on substructures of crude brick, and, even if the stone be afterwards stolen, there are always many fragments of it left behind. We can occasionally trace a place by the chips of stone which indicate the lines of the ancient walls. But no such relics are to be found at El-Kôm el-Aḥmar. In some cases crude brick walls were coated with thin slabs of stone on which were the sculptures, inscriptions, etc.; and in the Temple group at El-Kâb are remains of such a building. Mr Green thinks he found indications of this method of building at El-Kôm el-Aḥmar. In any case blocks of some weight would be required in such a building for columns, architraves, lintels, roof slabs and the like. In order to transport such blocks it is evident that some means of moving them other than dragging them from the river side to the site would, if possible, be made use of. We know that a canal was dug up to the site of Abydos³. There must, too, have been a canal at Thebes along which the vast masses of stone for the various temples were transported and which doubtless fed the Birket Habu. I would venture to invite Egyptologists to investigate this subject of ancient canals. The

¹ The way in which the Nile has, within a comparatively short time, changed its bed in different places, may be appreciated by studying the course of the river as given by Makrizi in his description of Cairo (see also S. L. POOLE, *Cairo Fifty Years Ago*). Again, by examining the map of the city given in the *Description de l'Égypte* and finally by examining the interesting map published by the Survey Department, in which modern Cairo is printed over the *Description* map, it will be seen that from the great Roman fortress, the Kaṣr esh-Shamʿa, following pretty closely the line of the Helwân Railway to Bâb el-Lâḩ and continuing very directly northward, the whole of the Frank quarter of Cairo is now standing where the river used to flow. Or at Thebes, what changes we may observe! The Nile at first had its bank east of the site of the Hypostyle Hall, then retired westward until the Great Pylon and the avenue of sphinxes stood on its east bank and finally retired still further to where we now see it. Or we may compare the plan of the district published by Sir G. Wilkinson with the more recent map published by the Survey Department.

² In QUIBELL and GREEN, *Hierakonpolis*, Part II, Pl. LXXIII, a map of Hierakonpolis is given, but its relation to El-Kâb is not shown.

³ See PETRIE, *History of Egypt*, III, 42.

absence of any considerable blocks or broken fragments of stone at El-Kôm el-Aḥmar may be taken to indicate that there never was a canal of importance leading to this site. The enclosure walls of the town (see Mr Green's map, Pls. LXXIII-LXXIII A) embrace but a small area, and within these walls was but little room for a considerable population. The treasures that were found on the site, many of which are to be seen at the Cairo Museum and are described in the publications of the Egypt Research Account already referred to, all belong to a period of high antiquity, far earlier than the temple below which most of them were discovered. In the later periods of Egyptian history the place must have lost all its importance.

The historical prominence of El-Kâb was far more continuous, although nothing of such interest to us moderns as the wonderful series of objects discovered at El-Kôm el-Aḥmar has ever been revealed there.

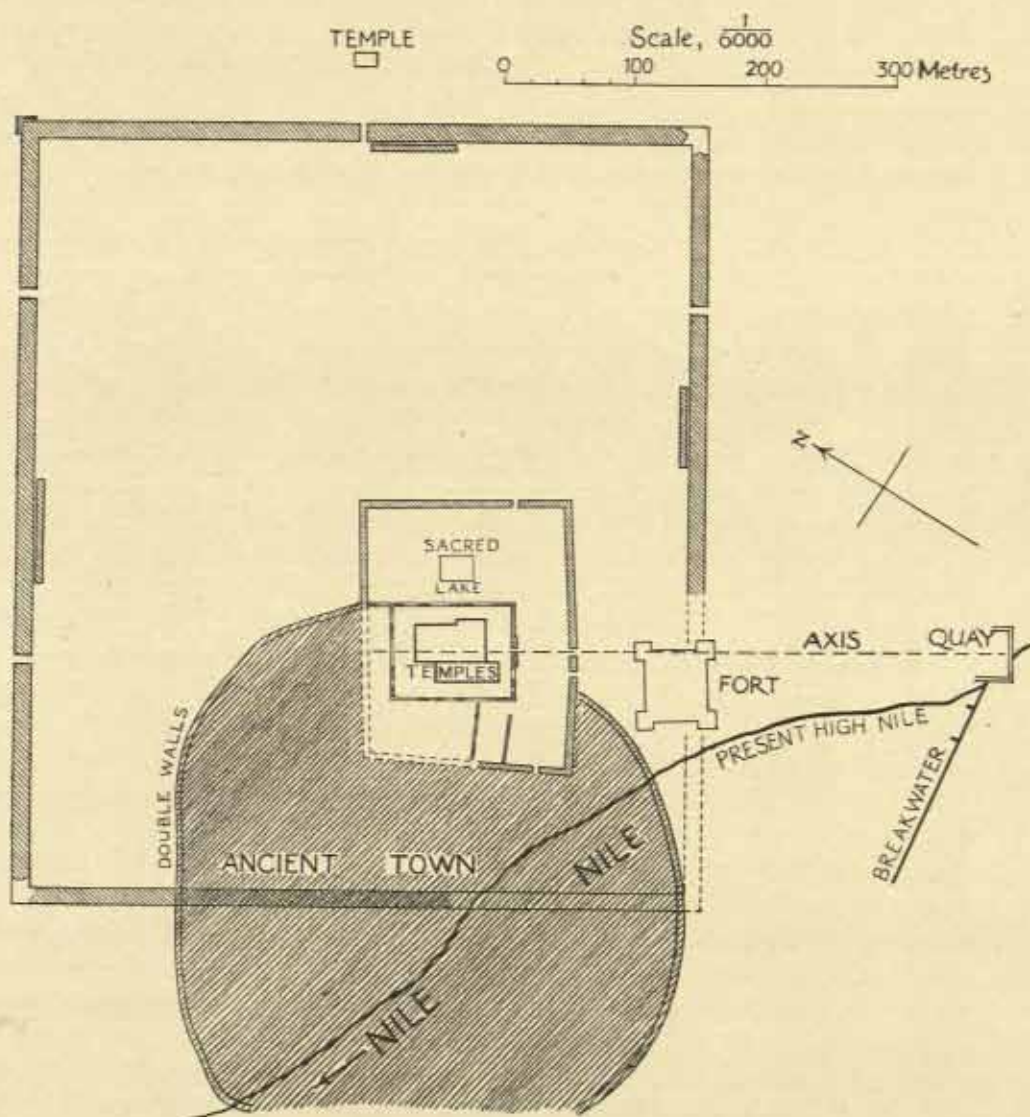
2. THE ANCIENT TOWN AND ITS WALLS.

When we examine the site at El-Kâb (see Pl. IX), one of the first things that we observe is that there are no less than three sets of walls. The word "sets" is here employed because there are found, clearly having relation to one another, first a double range enclosing part of the ancient town, second a double range enclosing the temple group, and lastly, most conspicuous of the three, the great and massive wall cutting across the site of the ancient town and including a very considerable tract of ground which has, none the less, never been occupied. The great walls are set out on a rectangular plan. In order to make the description more easy, I shall refer to the walls last mentioned as the Great Walls, while the other two sets will be termed the Temple Enclosure and the Double Walls respectively.

In examining the double line of curved walls we find left between them a space which is deeply covered with broken pottery and has evidently been dug over many times by *sebak*-diggers and others. The space defined on the north by the Double Walls is now a mere chaos; it marks the site of all that is left of the ancient town, and has been rummaged until nothing but a series of pits remains where once, no doubt, there were houses. But what we still see by no means indicates the full extent of the ancient town. The Double Walls advanced towards the river, and even so recently as twenty-nine years ago, when first I visited the place, there was ample evidence of habitations, outside and westward of the western line of the Great Walls; see Pl. X. A further proof that the town extended more to the west and south is seen in the fact that quantities of ancient pottery may be observed in the river-bank, and that inscribed cylinders and other traces of high antiquity have there been found¹. These traces extend for some distance southward along the river-bank.

The Double Walls are very much ruined, their latest wounds being those inflicted by the *sebdkhîn* at the time that the houses were dug away. Further, much damage must have been done by the walls of the Temple Enclosure, which were extended right into the heart of the town. Westward of the town, the Nile, as already stated, has always had a great tendency to eat away its right bank; in so doing it has devoured perhaps half of the ancient town.

¹ See J. J. TYLOR, *Wall Drawings and Monuments of El-Kâb: The Tomb of Pakeri*, London, 1895, description of Pl. X; cf. also J. E. QUIBELL, *El-Kâb*, Egyptian Research Account, 1897, p. 20, and Pl. XX, where similar cylinders from the cemetery are shown.



EL-KÂB: SKETCH-PLAN OF THE TOWN

Thus we find ourselves confronted with the following facts. (a) The remains of a very ancient town were enclosed by double walls just as the fortress of El-Kôm el-Aḥmar is enclosed down to the present day¹, and just as, also, we find at Abydos. But here it is not a question of a town within a fortress, but merely of one surrounded by double walls. (b) At some period or other the Nile had eaten its way so far towards the east that the town was threatened with destruction. As a result, the authorities decided that the town should be moved further eastwards. In this intention the Great Walls were built, cutting right across the old town and providing abundant room for its inhabitants to spread themselves within the new enclosure. Notwithstanding what was done, the inhabitants did not desert their old homes but continued to reside in them, as is proved by the fact that the only part of the area enclosed by the Great Walls which shows signs of habitation is that enclosed by the old Double Walls; within the very ample space provided outside those walls there is little, if any, trace of occupation. The people of El-Kâb continued to build houses one above the other in their customary fashion, until the new buildings rose to the full height of the Great Wall in its western section and covered it in part of its length.

We must now touch briefly on the history of El-Kâb, of which indeed but few particulars are known, though they take us through very many centuries. We have still the remains of the ancient town before our eyes. In the desert and hills lying to the east are many tombs relating thereto²; and at various points on the rocks lying in the same direction are the names of early kings of the Fourth, Fifth and Sixth Dynasties. Watching stations were established at well-chosen points, and this makes us realize that the place must have had strategic, as well as commercial, importance. The narrow pass that lies a little to the south was the scene of a battle so recently as the end of the eighteenth century, when the French Expedition was making its way up to the First Cataract.

So important was El-Kâb that we there find, besides the group of temples inside the Great Walls, no less than five others outside: one of Tuthmosis III³ a little to the north, another of Nektanebos immediately outside the desert gate⁴, and three more farther inland dated to Amenophis III⁵, to Ramesses II and to late Ptolemaic date respectively—the last developed out of a tomb. The temple group inside the walls also gives evidence of a vitality extending over a long period of time, in addition to the testimony derived from documentary sources⁶.

Down to the Thirtieth Dynasty the town seems to have flourished, but from soon after that time it probably began slowly to decay. I base this statement on the facts which came to light when I laid bare the whole temple site. We found evidences that part of the buildings were used as residences, fragments of pottery and Roman glass being dug up; and there were also a few interments, though none could be identified as Christian. By Christian times the place seems to have been quite abandoned. Nothing was found that we could associate with the Arab Conquest or after.

In view of the considerable importance to which El-Kâb once rose, it has been a disappointment not to have discovered traces of any ancient residences. The strip of

¹ See *Hierakonpolis*, II, Pl. LXXIV, with p. 19.

² See TYLOR, *op. cit.*, p. 1.

³ QUIBELL, *op. cit.*, Pl. XXVI. The *Description de l'Égypte* also contains drawings of this temple.

⁴ QUIBELL, *op. cit.*, Pl. XXII.

⁵ See *Wall-Drawings and Monuments of El-Kâb. The Temple of Amenhetep III*, by J. J. TYLOR, F.S.A. and SOMERS CLARKE, F.S.A., Quaritch, 1898.

⁶ The entire material is set forth in handy form in Mr WEIGALL's *Guide to the Antiquities of Upper Egypt*. Being a more guide-book, the accuracy of this work must not be too greatly depended upon, the compiler being blessed with a rather vivid imagination. None the less, the book is very useful.

cultivable ground bordering the river is so small that no more than now would houses be built upon it. Such building would be contrary both to economy and to common-sense. We might suppose that the houses of officials would be built on the desert land immediately to the east of the cultivation. The Nile has never flooded this ground, which lies at too high a level; but the evidences which we have searched for have not been found, either inside or outside the Great Walls.

Henceforth we shall confine our description to El-Kâb itself; but before embarking upon it a few words must be said as to the points of the compass. The course of the Nile is, in Egypt, so very usually from south to north that it is customary to regard down-stream as north and up-stream as south, although the windings of the river may lead us somewhat astray. At El-Kâb the Nile runs somewhat west of north. The great enclosure lies, however, with two of its walls almost parallel to the river, and these we will call the Eastern and Western Walls, the eastern one being situated towards the desert. The other two walls completing the quadrangle are, consequently, the North and South Walls. Reference to Pl. IX will show that the north point is, in fact, very nearly over the north-east angle of the enclosure.

To realize the most ancient form of the town we must remove from our minds all thought of the Great Walls which now form so prominent an object. As shown in Pl. X, the town was ovoid in shape, and was surrounded by a double wall of crude brick extending considerably more to the west than it does at present. Indeed, we may assume that perhaps half of the old town has been swallowed up by the river. The area of the ancient town can hardly have been less than that of the rectangle enclosed by the Great Walls. The temple or temples lay on the eastern skirt of the ancient town, upon a spot slightly raised above the general level of the ground to its west; and this elevation was slightly increased artificially. To north and south of the town, skirting the river, was cultivated land. Immediately east of the town was and is the desert, which was made use of as a cemetery from a very remote period. It will be observed from a study of the map that the Great Walls were subsequently built without regard to this cemetery. In some cases tombs were covered by them; but at the north-east side the large group of *maṣtabas* either presented too great an obstacle or was respected for other reasons¹.

Whilst the whole of the neighbouring *gebel* and desert is of sandstone and sandstone *débris*, the ground upon which the ancient town is built is of limestone detritus and rolled pebbles and boulders, some of considerable size, brought down by floods from the valley which opens from the east. So large a volume of detritus has been poured out upon the sandstone floor of the open valley-mouth that it has formed a long fan-shaped tongue of land, slightly raised and extending right down to the river. This raised bank was selected as the place of early settlement, and afterwards became the site of the town. It must be understood that the formation of this tongue of land and the settlement upon it are almost lost from view in the dim twilight of prehistoric antiquity.

To pass on to a more recent period, the tombs and *maṣtabas* already mentioned as lying to the north-east of the Great Walls go back to the Third and Fourth Dynasties. Their pits are now standing full of water through a great part of the year, though of course they did not do so when first built.

¹ QUIBELL, *op. cit.*, Pl. XXIII.

3. THE DOUBLE WALLS.

We will now proceed to describe the Double Walls which still enclose the northern portion of the ancient town.

The inner wall measures about 2·44 metres in thickness, the outer about 2·74 m., and the space between them is about 4·88 m. It must, however, be stated that it is most difficult, if indeed it be possible, to arrive at accurate measurements as to the thickness of these walls. Being built, as they are, of crude brick, they not only have suffered, from infiltration waters, but have also been the object of pillage, the material admitting of re-use. Houses long since decayed or removed have been built up against the inner wall. In sundry cases the builders of the houses have made use of the town walls as part of their parasitic structures, and time, as well as the action of moisture, has so fused together the original and the intrusive parts that it is often difficult to distinguish the two. The *sebbākhn* have not been particular to discriminate, so that in the process of stealing the house walls they have frequently skinned those of the town.

The bricks of which the Double Walls are built are much smaller than those of the Great Walls. Some of these bricks are 0·06 m. in thickness, 0·13 m. in width and 0·350 m. in length, but in this matter there are considerable variations, besides which it is evident that in many places the walls have been broken and patched. It seemed to me impossible to say what difference, if any, in construction and materials, existed between the inner and outer Double Walls. The inner wall is in sundry places higher than the outer, and probably was so built from the start¹. The bricks themselves were carelessly made, but little *tān* (chopped straw) being used; indeed both in size and in material they are very similar to the common domestic brick that runs throughout the ages.

I have no belief that the age of bricks may be told from their size. I think that the Ancient Egyptians were too sensible, in view of the differences in requirements, to bind themselves to any fixed size. In addition, the clay from one place will shrink more, in drying, than the clay from another, so that with moulds all alike it does not follow that the clay placed in them will produce bricks all alike. In one and the same building there may be observed bricks made from different clays, differing both in hardness and in colour; of which fact an example will be given later.

Whether the outer of these two walls was built by Amenemmes III, as some are disposed to think, is difficult to say. They would do him but little credit. The walls at the Second Cataract belonging to approximately the same date are wonderfully superior; but those walls form parts of real fortresses, as at El-Kôm el-Aḥmar, and are not merely town walls².

In 1893, when first I visited El-Kâb, the space lying between the two walls was filled for a depth of at least 2·0 m. with broken pot-sherds, while large quantities of sherds and town *débris* lay outside. The pottery was of all dates and had been turned over at many different times, so that no conclusions could be reached by observing stratification. By the year 1898 still further turnings over took place; and subsequently, M. Maspero gave permission to those engaged in making the Luxor-Aswân Railway to take (under supervision) many tons of sherds for consolidation of the permanent way, not only from between the walls, but also from the many pits that occupy the place of the town houses.

¹ So too in the case of the fortress at El-Kôm el-Aḥmar, *Hierakonpolis*, II, 19.

² See *Journal*, III, 155-179.

It was possible, in 1893, to trace on the west side of the western Great Wall the continuation of the Double Walls of which I have been writing. Though the traces were few, there was evidence of ruined houses and of much pot-sherds extending towards the river. Their fragility and the constant attacks of moisture, as well as their value to the cultivator, have by now removed these traces. Annually, as the Nile retires within its bed, the river bank is exposed and in it are seen many fragments of pottery of all periods. Inscribed cylinders have already been quoted as found there. Towards the south, the town appears to have extended as far as the line of the southern wall of the Great Enclosure. How far the town stretched westward it is impossible to say; but we shall, I think, be safe in supposing its limit to have reached at least 250 m. beyond the Great Wall. I shall return to this subject later in treating of the breakwater that was constructed to protect the south-west angle of the new enclosure (see below, p. 69).

After the Great Walls had been built, it is very evident that the people continued to live in their accustomed places, although many of their houses must have been destroyed in the process. They soon healed the gash that had been made and continued to build until the houses rose right over the new wall. There was some wisdom in keeping to the old site as long as they could do so: the people had not so far to go for water as they would have had if they had migrated to the new site within the rectangle.

I am able to give a rather interesting account of El-Kâb as it was many years before I saw it first in 1893. This I obtained from the *ghafir* of the Service of Antiquities named Suleimân, who was at that time about 48 years of age. He told me how he remembered seeing, as a small boy, the *fellâkh* digging *sebakh* from against the inner Double Wall. This wall stood up quite high, almost as high as the piece of wall still standing which at the present day (1920) forms part of the north wall of the Temple Enclosure¹. Suleimân stated that the town wall resembled the walls that used to stand about the temple of Edfu with houses built high up against them. He remembered how, when the supporting masses of *sebakh* had been removed, large pieces of the wall fell down and made masses of dust like red smoke. The whole town area was covered with ruined houses which lay at that time quite high up against the western Great Wall. His father had told him that this part of the Great Wall was entirely buried under houses when he was young. By way of comment upon the above statement I may say that in no place is the facing of the Great Wall so well preserved even at the present day as in the case of its western portion: the result of its having, until recent years, been so completely covered with houses². Suleimân further stated that against the piece of wall referred to, being a piece of the Temple Enclosure walls to the north, the houses were mounded up, and indeed there can still be seen the mark of this mound on the northern face of the wall. I am able to support Suleimân's statement by a reference to certain notes which were made by E. W. Lane and are preserved at the British Museum (*Add. MSS.*, 34083, 4, 5, 6).

In addition to his well-known book, *The Modern Egyptians*, Lane had proposed to write and illustrate a work descriptive of the Nile. In connection with his visit to El-Kâb he refers to the mound of ruins piled over the site of the town. The industry of the *sebbâkhîn* has now completely reversed the situation as described by Lane, the site of the mounded

¹ This piece of wall is falling to pieces rather quickly, as a large flake is subsiding from its southern face.

² This wall is now rapidly perishing through the action of the moisture at the foot. Within the last six or seven years (1919) large pieces of the facing have slipped down and fallen to pieces, while immense longitudinal cracks are developing. See Pl. XV, top.

houses being at the present day a series of small pits holding more or less moisture and hoary with salt during the period of Low Nile¹. When the *sebbakhîn* are busy upon a deposit of the materials they so much prize, they do not stop digging until they reach mother earth. The depth of the existing pits and the height to which the mound must have risen was not, added together, less than six or seven metres as an average, and in places even more. It is almost needless to say that the *sebakh*-digging has been stopped for many years, the place being now carefully guarded.

Through the kindness of Professor Sayce, I am able to supply some evidence as to the state of El-Kâb at a period well before that of the *ghafir* Suleimân or his father. Professor Sayce sends me an extract from a book entitled *A View of the Levant* published by C. PERRY in 1743. On p. 361 we read: "At a place called Caab, about 27 leagues below Asoân, on the East, is a high mountain with a castle at top of it; and in the Plain below bearing East-South-East of it, we discovered something that looked like a piece of Antiquity. We ordered the Master to put to the shore, and after we had walked about half a mile we came to the remains of an Ancient Temple, consisting of Six Pillars, in Two Rows, with their roofs entire. A little to the North of these are the Fragments of many other broken Pillars, and considerable other Ruins, and curiously wrought with Hieroglyphics, etc. To the West of it is a sort of Room which is Six Paces long, Four broad and Five high, all richly wrought with Hieroglyphics, etc. Bearing South of it at some distance, we found a great many stones all wrought into form, and covered with Hieroglyphics, and besides these many precious morsels of finest dark-grey Granite, so that, allowing these things adjacent to have belonged to the Main Edifice, it was nearly 100 paces long."

This account is exceedingly valuable, as it enables us to picture to ourselves the immense change in the appearance of El-Kâb wrought by 180 years. The travellers by the river, approaching from the south, see "a high mountain with a castle at top of it." The "high mountain" is certainly poetic, but the eminence can hardly be other than the upstanding rock in which are the well-known tombs of Paheri, etc., etc., and on the top of which are the remains, in sun-dried brick, of an outlook or other station of considerable size, though this can now hardly be noticed from the ground below. The houses, heaped one upon the other, evidently so covered the western portion of the Great Walls that our travellers did not even observe them, since they do not even mention what is now the most striking landmark of all. The columns referred to formed part of the Hypostyle Hall of the temple, and are mentioned by Champollion in *Lettres écrites d'Égypte*, 194. The fragments to the north were part of the sanctuary of the large temple, three chambers in a row. The outline of the walls of the little chamber to the west, "a sort of Room," can still be traced (1919), as also fragments of the dark-grey granite which are, in fact, part of a colossal figure beaten to fragments and lying close beside the Ptolemaic Porch that covered the entrance to the large temple of the Twenty-sixth to Thirtieth Dynasties. The writer's conjecture was thus justified, and his guess at the length of the buildings was very correct.

We must realize that the mound formed by the ancient town was so great, and its magnitude (assisted by the considerable ruins both of the temple and of the high wall within which is the Sacred Lake) so impressive, that the attention was quite distracted from the Great Walls. Where the visitors saw an extensive mound we now behold a melancholy and hungry hollow; where they saw standing columns we now discern nothing rising more than a metre above the floor level. The final destruction of the temple ruins

¹ Lepsius, in his plan of El-Kâb (*Denkmäler*, I, 100) also shows a mound where these pits now are.

was indeed brought about by the Government under the enlightened rule of Ismail Pasha, who directed that such stones as could be used should be collected and taken to El-Mataṣnah for building the sugar works.

We must now attempt to assess, so far as we are able, the approximate date of the Double Walls. Beyond a doubt, they bear a close relation to the mass of ruined houses which they in part enclose. I venture to affirm that they equally clearly have no relation to the Great Wall, which cuts right through and over the ancient town in the most ruthless fashion. Where the Double Walls still remain, we can trace the ancient houses coming right up to the inner one, and piled up against them in the manner described by the *ghafir* Suleimān. On Feb. 22, 1904, Professor Sayce and myself began to search for relationship, if it should exist, between the Double Walls and the Great Enclosure Wall. By measurement we carried the lines of the Double Walls from the east to the west sides of the western Great Wall, and there we found the remains which we sought, running straight on towards the river. Obviously, the new wall could be in no way connected with the old, but cut through it, just as it also cut through the houses of the town. There was no deep foundation for the new wall, which rested partly on a sandy loam and partly on the remains of older buildings. This examination proves, I think, that whatever may be the period at which the Great Wall was built, it is of a date decidedly later than that of the Double Walls and of the houses through which it cuts in so disdainful a way.

Against the inner or eastern face of the Great Wall we dug downward vertically until we arrived at its foot. At this place we found that it rested on a layer of broken sherds, ashes and bits of charcoal, evidences, as we considered, of an occupied house. These remains could be traced for a length of 10 metres. The level of this layer was nearly 1 metre above the average present level of the town site. Below the layer described, we found hard sandy earth free from pottery and charcoal. Doubtless the great weight of the wall, combined with the effects of infiltration, had somewhat changed the originally looser character of the soil. Near the wall-face, and at the distance of 1 metre below the layer above mentioned, we came upon the remains of a house-wall of brick, broken pottery, rubbing stones and worked flints. The accumulated house *débris* must have been deep when the Great Wall was built right over it.

4. THE TEMPLE GROUP.

We must now devote ourselves to the relationship, one to the other, of the group of temples which stand at the eastern edge of the ancient town. This group of temples is one of singular interest, the buildings of different periods being so curiously intermixed. An examination shows that the buildings are none of them parts of the most ancient structure or structures that stood on the site. As a test, soundings (begun Jan. 11, 1914) were made by us upon the line of the axes of the two largest temples. The indications were in all cases the same. We found that a slightly raised mound had been selected for the temples, but that in an earlier period the mound had been occupied by dwellings of some sort. Vestiges of very thin walls and also of the refuse of habitation were found. It is upon these that the temples were placed, whereby the town came to occupy a place between the temples and the river.

Traces of a temple of early date were discovered in two large blocks of red granite, perhaps the bases of obelisks, as well as a door-sill of the same material in which may be seen the sinking for the door-pivot. These three blocks are almost beyond doubt in their

original positions, but bear no relation to the existing temple walls, in spite of the fact that the door-sill stands on the axis maintained throughout the ages for the chief temple. A temple with the cartouche of Tuthmosis III succeeded the temple with the granite door-sill; but whether any building intervened between the two we know not. Ramesses II made additions to the temple of Tuthmosis III, building brick pylons which extended the building towards the south. A great transformation took place as late as the Twenty-sixth Dynasty, when much material from the temple of Tuthmosis III was used as foundations for a new building, which, religiously preserving the original axis, was extended both northward and eastward. Still later a porch of five bays lengthwise—a type of building much in favour in Ptolemaic times—was added southward of the pylons contributed by Ramesses II.

Side by side with the temple already described, and to the west of it, was built another, in the foundation deposit of which we discovered the cartouches of Amenophis II, while on its walls were found the names of Amenophis II, Ramesses I and Ramesses II. This temple was likewise in part built with fragments from a structure of Tuthmosis III¹. It can easily be seen that the temple of Tuthmosis III first mentioned must have been standing when the temple of Amenophis II was erected, as this was very much controlled by its larger neighbour. The later temple was, nevertheless, carried on southward, and its eastern pylon actually encroached into the forecourt of the earlier building. When, however, the earlier building was rebuilt and considerably enlarged, this state of things was reversed. The eastern wall of the forecourt of the lesser temple was pulled down, and the western wall of a completely new forecourt to the large temple took its place. It is as part of the project for reconstructing the larger and more ancient temple, a project initiated about the Twenty-sixth Dynasty, that the erection of the Great Walls of El-Kâb must be viewed.

The Temple Group is enclosed by two sets of walls, marked XXXX and YYYY in Pl. IX, the one inside the other. It was the universal custom in Egypt to enclose a temple with solid walls of such a height that only from some way off could the highest parts of the structure, excepting the pylons, be seen. The great gateway was very usually set on the line of the enclosure wall. At El-Kâb we find the rectangle of the inner enclosure (XXXX) clearly defined, with the pylon of the largest temple in the line of the southern wall, and exactly on the axis of the said temple. The rectangle thus formed may be dated far back, earlier than the rebuilding of the temple by Tuthmosis III. The eastern wall of this enclosure unites at its northern extremity with the Double Walls of the ancient town. Unfortunately, we cannot find any continuation of the Double Walls projecting southwards from the enclosure. The whole surface of the ground southward of the Temple Group has, at one time or another, been dug over, perhaps when the outer Temple Enclosure and the Great Walls were built.

This second wall (YYYY) is likewise built of crude brick and laid out in relation to the temples. It presents some peculiarities in its plan. The eastern wall is parallel with the temple axis. At right angles to this and starting from the north end is a wall stretching towards the west. This now stops at *W*, the point where the Double Walls meet it; but there is enough to show that it continued much farther westward over the site that has been dug into pits by the *sebbâkhîn*, and accordingly enclosed the temples on the north. From the southern end of the east wall there ran westward a wall similar in construction

¹ QUIBELL, *op. cit.*, 20 with Pl. XXI.

and materials to the pieces above mentioned. This formed the southern enclosure of the temples, and in it are the ruins of two gateways *S* and *T*, the one on the axis of the large temple, and the other on that of the temple of Amenophis II. Through the first-mentioned of these two gateways the temple axis, if produced, leads straight to the masonry quay or platform on the bank of the Nile.

The enclosure wall *YYYY* is built in blocks or panels in the same way as the Great Walls, and the size of the bricks is considerably larger than those employed in the construction of the ancient Double Walls. The stone-lined gateways *S* and *T* are sadly broken up, but the remains of the cartouche of Nektanebos are visible. This justifies the belief that the enlarged temple, together with its enclosure and gateways, belongs to the Twenty-sixth to Thirtieth Dynasties, and that the Great Walls, so well laid out in their parallelism with these monuments, are, in fact, part of the same project.

The information was volunteered to me by *fellâhîn* on the spot, and not asked for, that they had found remains of a stone-paved road on the line of the temple axes. The space traversed by this road is now cultivated; this, and the value of the stones for building purposes, are reasons more than sufficient to account for their entire disappearance.

The west wall of the Temple Enclosure with which we are now concerned is at right angles to the south wall, and has suffered very much. Through it, as well as through the east wall, is the lowest course of a stone-lined gateway. Thus, in addition to the two gateways in the south wall, there was one in the east, and another in the west. At the north-west corner the walls forming the enclosure are entirely destroyed. To judge from the condition of the ground at this angle, it may be presumed that the enclosure walls were carried forward right over the houses of the old town, just as we have found was done in the construction of the Great Walls. The hand of the autocrat seems very manifest in each of the cases; but those with whom autocrats are out of favour will be pleased to observe that the inhabitants of the town proved the stronger in the end, since they did not migrate to within the newly created area.

The Sacred Lake, surrounded by a revetment of masonry, lies just east of the temples, and the stone steps that led down to it can still be seen.

The great revival of interest in El-Kâb which must have come about in the later dynasties is proved by the amount of building then carried on there. I have shown that there are no indications of any relation between the Double Walls and the axis of the venerable temple which stood on the eastern edge of the town; but I claim that abundant evidence exists to prove that the walls constituting the large Temple Enclosure were adjusted to the temple axis and buildings. When these works were undertaken the temple group had already been established for many centuries, and it ultimately culminated in the large temple bearing the cartouches of Akhoris and Nektanebos, larger by nearly twofold than the temple which it replaced. The Great Enclosure Wall was, I venture to affirm, part of the same scheme, the evidence afforded by its construction carrying much greater weight than the meagre documentary evidence that has been quoted to the contrary. The archaeologist finds an inscription from which it is clear that a wall existed at El-Kâb in the Twelfth Dynasty, and that new work connected with it was carried out by Amenemmes III in the same Dynasty. He sees a large wall at El-Kâb. Clearly that is the wall spoken of on the stela. Does the inscription afford any such proof? Balbus built a wall; therefore the enclosing walls still seen at Rome were built by Balbus!

The inscription in question is a stela discovered at El-Kâb and brought home by the Rev. H. Stobart of Queen's College, Oxford, who published it in a thin folio entitled *Egyptian Antiquities collected on a voyage made in Upper Egypt in the years 1854 and 1855*. The greater part of the collection is now in the Museum at Liverpool, but the stela has disappeared. At the top are the names of Amenemmes III, "loved of Nekhbet, lady of heaven," the patron-goddess of El-Kâb. Of the text below only three lines remain, as follows: "*Year 44 under the Majesty of this god. He made (it) as his monument, His Majesty commanding to build walls (snbt) which are in 'Walls of Seshmu-towe, deceased.'*" So Dr Gardiner renders, who tells me that Seshmu-towe is undoubtedly the Horus-name of Sesostri II, the second predecessor of Amenemmes III. The late M. Georges Legrain, so well known for the admirable work he has done for the repair and maintenance of Karnak, took a different view. In an article written in 1905¹ he contended that Samou was really the reading of the name which others read Seshmu-towe, and that Samou was a king of the very oldest period. Then, translating, "the ramparts² which are connected with the walls of the King Samou, deceased" he conjectured that the walls of Samou were the Double Walls enclosing the town, and that the additions of Amenemmes III were the Great Enclosure Walls ascribed by me to the Twenty-sixth to Thirtieth Dynasties.

But it is impossible to find any connection between the Great Enclosure Walls and the more ancient walls once enclosing the town. I am therefore obliged to disagree with M. Legrain's view. Why may not the work of Amenemmes have consisted in substantial repairs to the old town wall, or perhaps in the addition of the external Double Wall to the internal one, this method of fortification being well known at that time and existing in great perfection at Hierakonpolis.

From the point of view of architectural archaeology the evidence is very strongly in favour of the Great Enclosure Wall being of a much later period than the town and its double enclosing walls. If the ancient town stood, as certainly it did, so near the river as to have been half washed away, how is it that the new wall has not been placed in relation to it? But, in fact, we find that fully half the area of the ancient town is not within the area enclosed by the Great Walls; in other words, the Great Walls were not built in relation to the town.

5. THE GREAT WALLS.

We must now turn our attention to this very striking monument, and I will begin by pointing out that it was not built as a fortress, but merely as a town defence. From very early times the Egyptians had thought out most of the essentials of a place which was to resist a siege—of a fortress as distinguished from a protected town. The most complete and well-preserved specimen revealing their knowledge of fortification is to be found at Semnah in the Second Cataract. This place, laid out on scientific lines, is provided with a glacis, ditches, lofty walls and many spurs and projections by which, as in the case of the towers of a Roman or mediaeval fortress, the outer face of the main walls could be protected from assault. Thus, Vauban was anticipated by several thousand years. The great fortress at Semnah lies on the west bank of the Nile. At Semnah Esh-Shark ("Eastern Semnah") we may observe the same regard for scientific defence, but on a smaller scale. At Matûka (Mirgissah) similar methods are visible, but are skilfully varied in order to suit a different

¹ *Proc. Soc. Bibl. Arch.*, xxvii, 106-111.

² Is this word properly translated as "ramparts," or does it mean simply "wall"?

situation. At Bûhen another variety of the like methods of fortification is found, and so in other places. These facts have been set forth in a paper contributed by me to the *Journal*, III, 155-179. At Kubbân, in Nubia, at a considerable distance north of Semnah, we find the remains of a large and massive wall of sun-dried brick enclosing a rectangle; the place bears considerable resemblance to El-Kâb, but is smaller. In this case the river was held to be a protection on the west side, which flanks the Nile, but on the north, east and south sides there are the remains of a dry ditch of considerable size and of massive spur-walls from the tops of which the defenders could assail those attacking the main walls or gateways. Nothing of this description is to be found at El-Kâb. Connected with the remains of the Double Walls enclosing the ancient town there are no traces now existing of gateways, of entrances, of spur-walls or of towers.

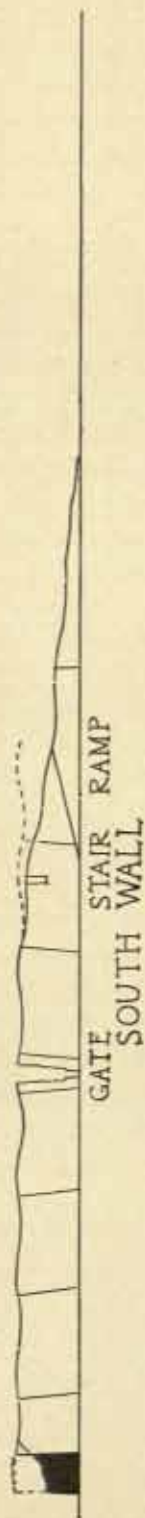
The Great Walls of El-Kâb enclose a considerable area, as Pl. IX clearly indicates, and are set in very regular form. Ramps of easy gradient, as solid and massive in construction as the walls themselves, gave access to the summit on the north, the east, and the south; there were also three shorter ways to the top of the walls, that on the north being remarkably well preserved, see Pl. XI. Neither ramp nor staircase can be traced in the west wall. The walls are constructed entirely of large, well-formed bricks, sun-dried and mixed with *tibn*. The Nile mud was used not only for the bricks, but also for the mortar. The manner of building a wall of mud-bricks is described in my paper on Nubian fortresses above referred to. The dimensions of many bricks are quoted, and it will be found that the brick made use of in the Great Walls of El-Kâb somewhat exceed in size those mentioned in the list there given. The bricks of El-Kâb measure $0.38 \times 0.15 \times 0.19$ m., but some are of $0.38 \times 0.16 \times 0.18$ m.; undoubtedly other small irregularities could be found and these are easily accounted for by the differences in the wooden moulds in which the bricks were made, as well as by shrinkage of the clay.

No stone whatsoever is used in the construction of the walls, though we might have been prepared to find in the lower courses several layers of stone, at any rate in the west wall and in that part of the south wall where the structure approaches the river; much searching has not enabled us to find even a trace of stone-construction. Although the Great Walls we now speak of stand above the level of High Nile, the infiltration from below has been very destructive in the parts near the river, the more so since the desert, and indeed all the neighbouring land, whether cultivable or not, revealed the presence of salts. The wells, for the most part, afford water that is more or less saline. There is also much natron, to which both stone and granite fall victims.

The south-west angle of the Great Enclosure has suffered severely, though the cause of this is, in my opinion, difficult to define. I shall deal with this matter, which is of a rather technical nature, in an Appendix. The length of the respective sides of the parallelogram, taken from the centre line of each block of wall, as nearly as we could ascertain, is: north side 593 m.; east side 517 m.; south side 577 m.; west side 510 m.¹ The meeting-point of the south and west walls is entirely gone and could only be inferred. The levels of the bottom line of wall-foundations were but a little below the ground. Where the Nile has invaded the wall, the earth has been washed away far below that level.

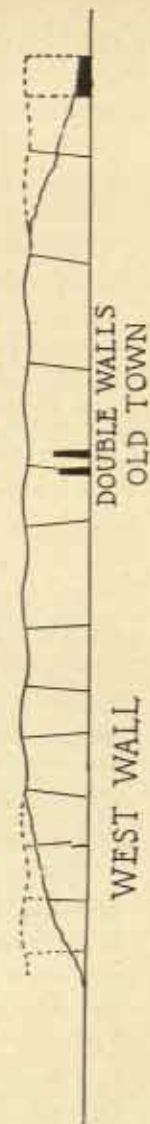
The visitor will observe in the case of this Great Wall, and may well have noticed the same in sundry other places, that the courses of bricks are not horizontal but undulating. Certain persons who have paid but short visits to localities where brickwork of this kind is

¹ These measurements were made with great care by Mr F. W. Green.

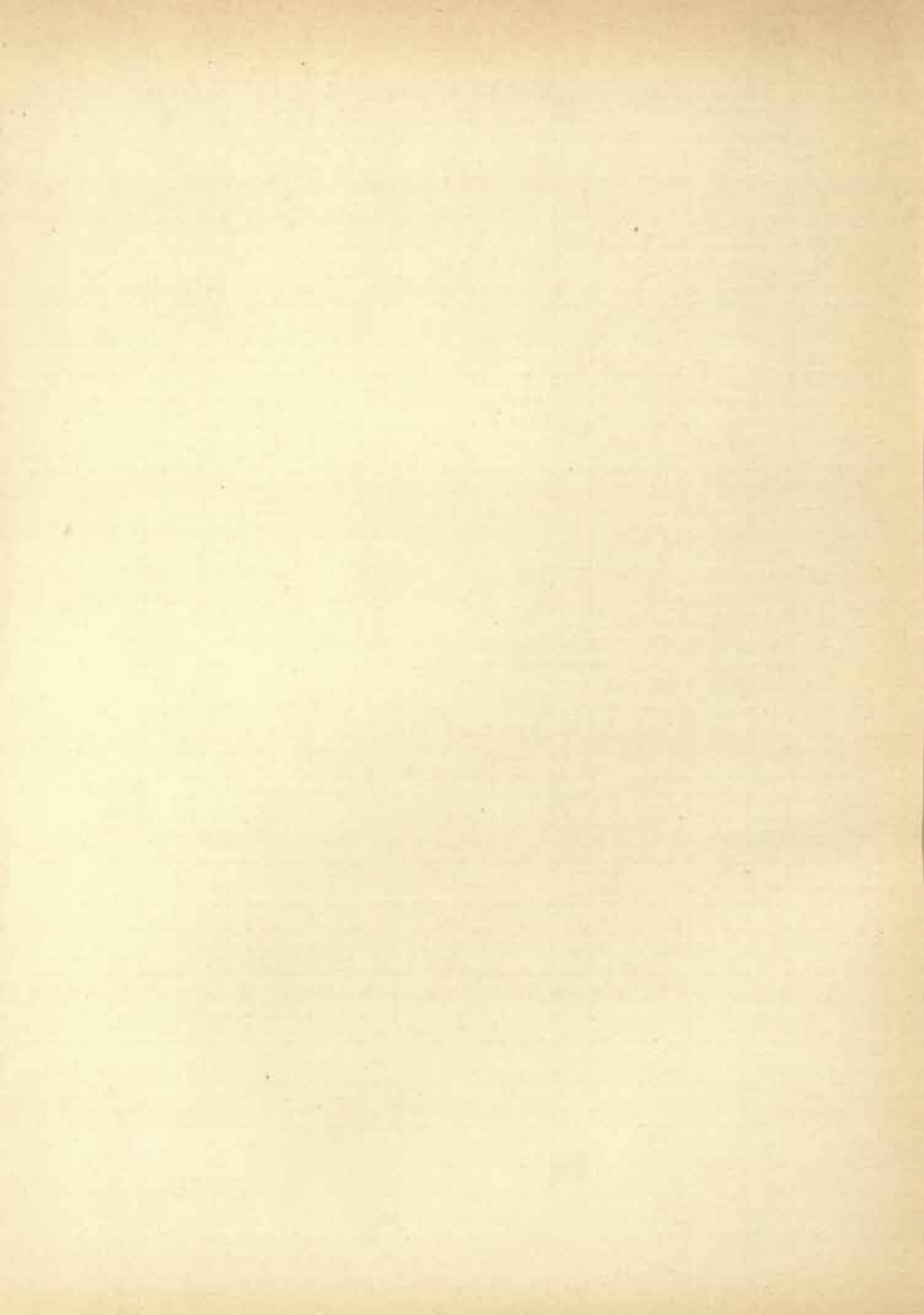


Horizontal Scale, $\frac{1}{2500}$
0 50 100 150 Metres

Vertical Scale, $\frac{1}{250}$
0 20 40 60 80 Metres



EL-KÂB: ELEVATION OF THE GREAT WALLS



found, tell us that such undulations are the result of settlements; but, when placed face to face with an elevation based on measurements, they generally change their view. It is quite out of the question to attribute such regular undulations to mere accident; there is clearly method in them. But this is a matter which cannot be discussed here, as it is technical and not archaeological. The plan upon which the walls were laid out is evidently in relation to the group of temples, which were carefully incorporated into the new scheme and formed its nucleus, though not actually its centre.

The eastern wall had one gateway nearly in the centre of its length. In the northern wall there are seen preparations for two gateways. The southern wall has lost more than half of its length, but it is evident, nevertheless, that it possessed two gateways, and there may have been even a third. The gateway in the eastern part of the south wall lies opposite the eastern gateway of the north wall; that to the west was on the line of the axis of the great temple and spanned the road or dromos which led to a stone quay on the river bank, hereafter to be described under the heading "The Breakwater." There was another gateway through the Temple Enclosure on the axis of the Temple of Amenophis II, and there may have been a dromos also in this case; if so, a second gateway in the Great Wall close beside the gateway last referred to, is accounted for. The western block of the Great Wall does not show any evidence of a gateway in those parts of it which are preserved, but we cannot suppose that a ready access to the Nile for fetching water was forgotten. May we not affirm that the Great Wall we are describing was, as compared with the town, a relatively modern work? Our excavations have revealed that the ancient town had already heaped up house upon house, in the customary way, when the decision to build the Great Wall was framed. To achieve this object a wide trench was cut right through the existing town, and the wall was built in it, the inhabitants being permitted to close up the gash by building their houses against the intrusion, and ultimately right over it. It seems to have been understood that this would take place, for there is not the smallest evidence, in what remains of the north wall, that a gateway or connection between the two parts of the now divided town had been provided.

We know of what cramped conglomerations of small houses ancient towns consisted, and that not only in Egypt. The narrowest of lanes were lined with houses piled one over the other and sometimes carried right across the footway. I was able to make a sketch-plan of part of Mahendi in Nubia, a town contained by walls in which the cramming together of houses can be well observed¹. The streets are so narrow that a donkey with panniers could not pass along them. The place is quite abandoned, and has probably been so for several centuries. All the houses are of mudbrick, the little rooms are vaulted and supported an upper storey. The upper rooms are, in many cases, carried over the lanes on tunnel-vaults, so that even now, when the place is ruined and doorless, twilight reigns in these dismal passages. The plan of the town gives an appearance which the eye does not, in fact, appreciate. At Kaşr Ibrîm, also in Nubia, somewhat south of Mahendi, the ruins of the houses show that the town was no better than a jumble: this town was occupied at the beginning of the last century. Khargah, the chief town of the Oasis of that name, is a still living specimen of a place similar to Mahendi and Kaşr Ibrîm.

¹ See SOMERS CLARKE, *Christian Antiquities of the Nile Valley*, Oxford 1912, Pl. XXII.

6. THE GATEWAYS.

These have not all been completed. We find two only, those in the east and south walls, which give us a fairly exact idea of the intentions of the builders.

Sun-dried brick, though perishing quickly under the influence of water, is very tough and resisting when found in a thick mass. When the wall composed of such bricks is a solid forty feet in thickness, it offers a formidable resistance to him who would penetrate it. But where a gateway is built, the wall is already pierced. The method of defence adopted by the builders of El-Kâb was to make the passage way as small as possible and to imbed it in a considerable mass of masonry.

Plate XII gives the plan, section and elevation of the southern gateway (Pl. IX). This gateway is so similar to that in the east (Pl. IX) that I do not give measured drawings of the latter.

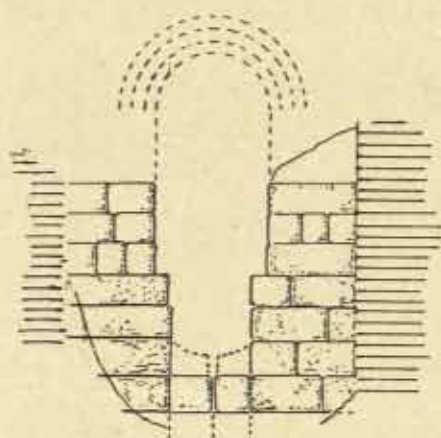
It is clear that one object in view when these gateways were made was simply obstruction. A camel could not enter unless very discreetly loaded, as the passage-way was too narrow. As we see from the elevations (Pl. XII) all the lower parts were lined with blocks of stone, considerable in size and laid very close together. Underneath there were four courses, and the linings of the sides consisted of five courses. All was enclosed in solid brickwork. The passage-way was covered in with a tunnel-arch in three rings, this arch being likewise completely imbedded in brickwork. As the great wall was 12.10 m. in thickness (nearly 40 feet), it is clear that it would be nearly as difficult to effect an entry by attacking such a gateway as by burrowing a tunnel expressly for the purpose. I failed to find any evidence as to the way in which any system of doors was established. Pl. XII gives a plan of the gateway and an elevation of the wall on its east side.

The eastern gateway, issuing towards the desert, has suffered more than the southern one, many of the stones of the upper courses being lost. Such testimony as remains indicates, however, that the two were exactly alike. Sundry blocks of stone built into the eastern gate have evidently been removed from other buildings, a fact which again confirms my view that the wall and its gates are by no means so ancient as some would make out.

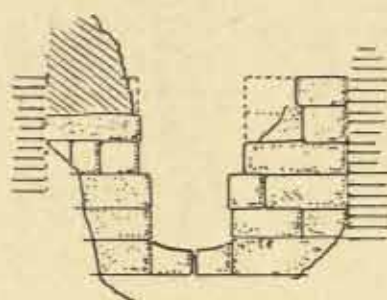
In the north wall opposite the southern gateway are the preparations for another gate, see Pl. XIII. This wall is wonderfully preserved, lacking less than a metre, as I believe, of its full height. It owes its preservation very much to the prevalent N.W. wind, which has not only heaped up the desert sand against it, but, lifting the sand right over, has deposited it on the south side to a height nearly as great as on the north. By this means a precious relic has been preserved, consisting of a crude brick arch of 4.50 m. span (14 ft. 8 in.), in four rings, which forms a tunnel through the thickness of the wall. The elevation on Pl. XIII is that of the north face of this arch. At its ground-level the archway is completely filled with brick *débris* (see section), except for a narrow passage in the middle; this mass is 1.75 m. in height.

The arch is built with the joints between the bricks converging towards a central point from which the centre of the arch was struck. This method of building an arch, so far as my observations go, was quite unknown in ancient times. The earliest examples I have met with are some small arches at Medinet Habû, and these are of the Twenty-sixth Dynasty (663-525 B.C.). It was the sight of this arch that first impressed upon me the view that the Great Walls were by no means so venerable as was claimed, but were of the same period as the reconstruction of the temples.

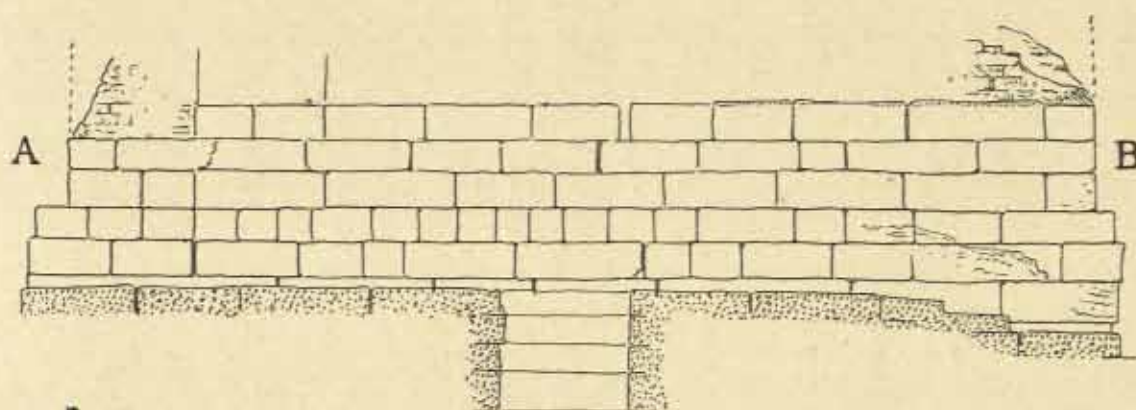
That the archway through the walls should be filled up with earth is in accordance with



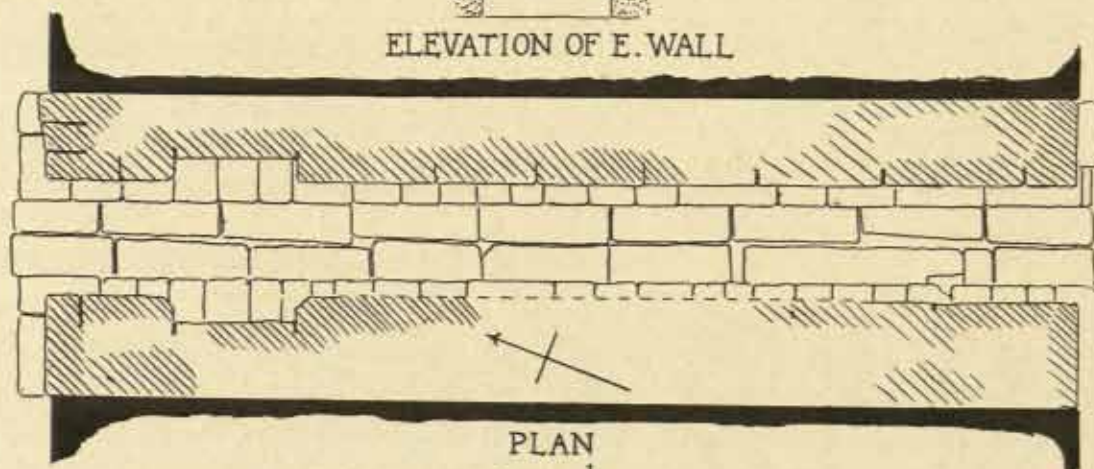
ELEVATION AT NORTH END



ELEVATION AT SOUTH END



ELEVATION OF E. WALL

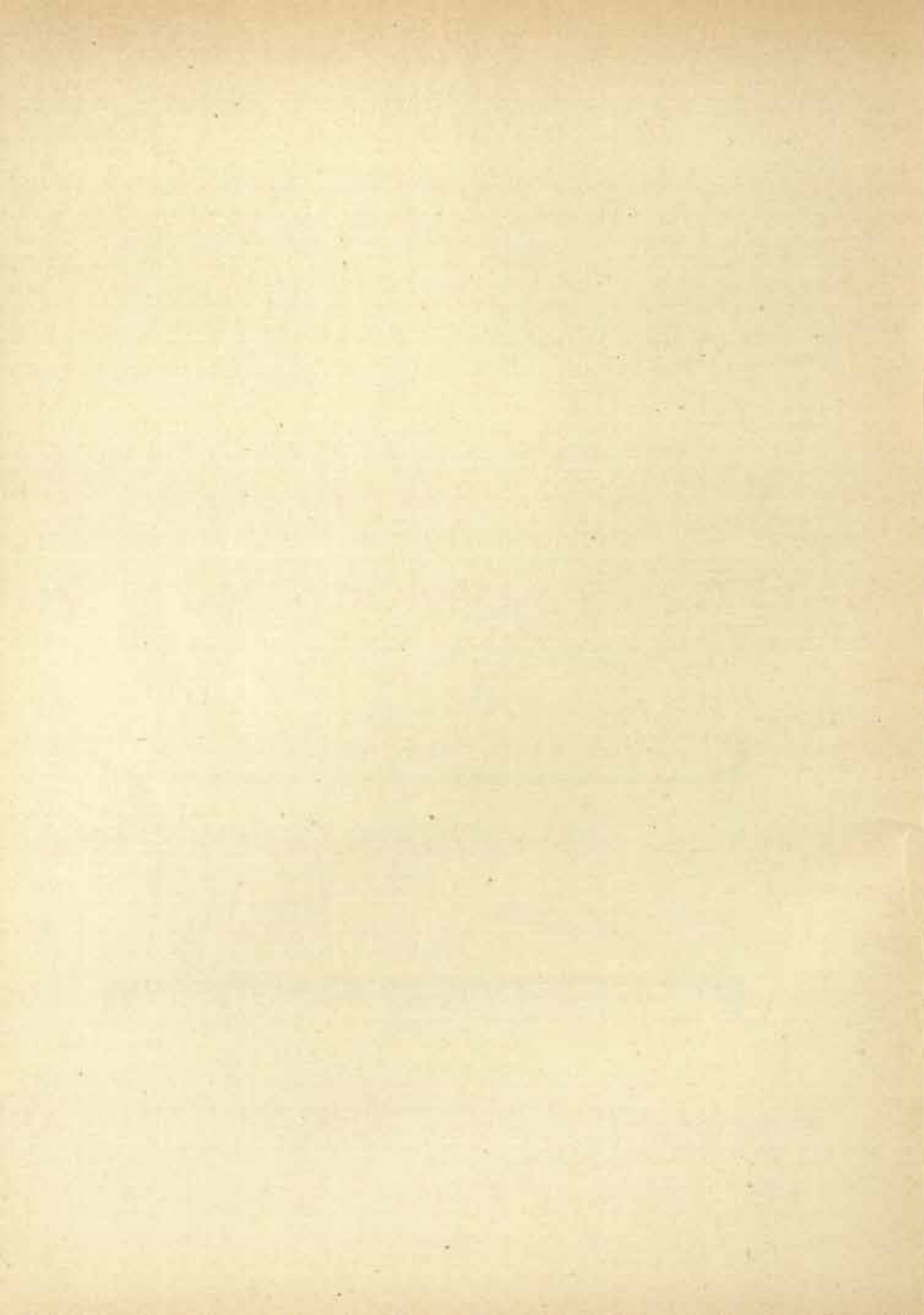


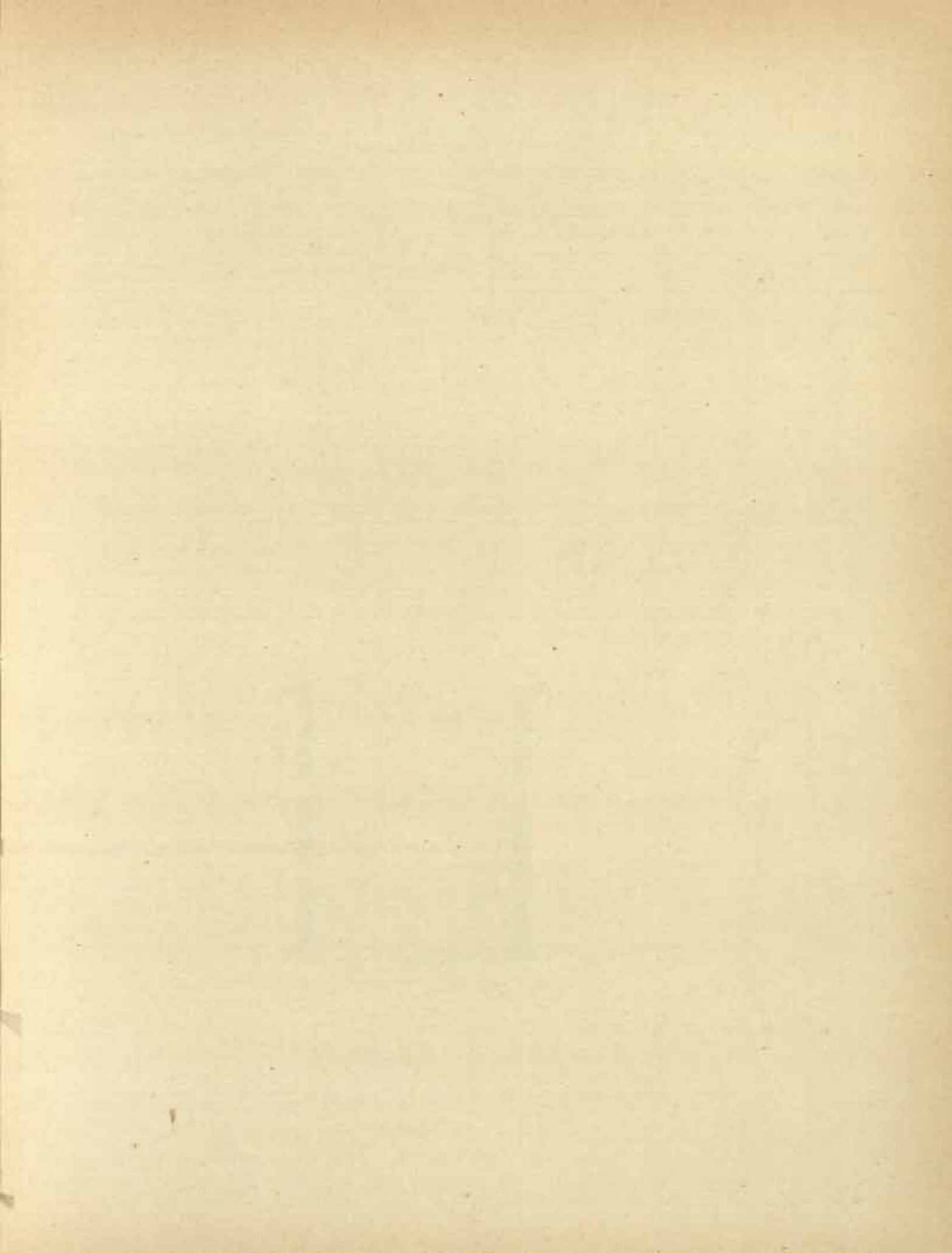
PLAN

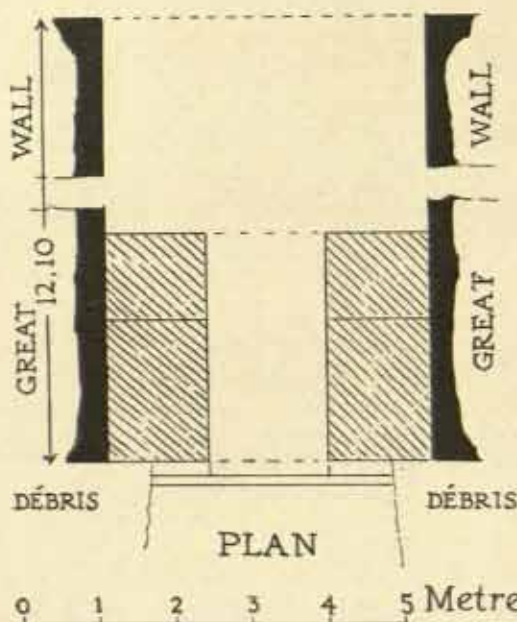
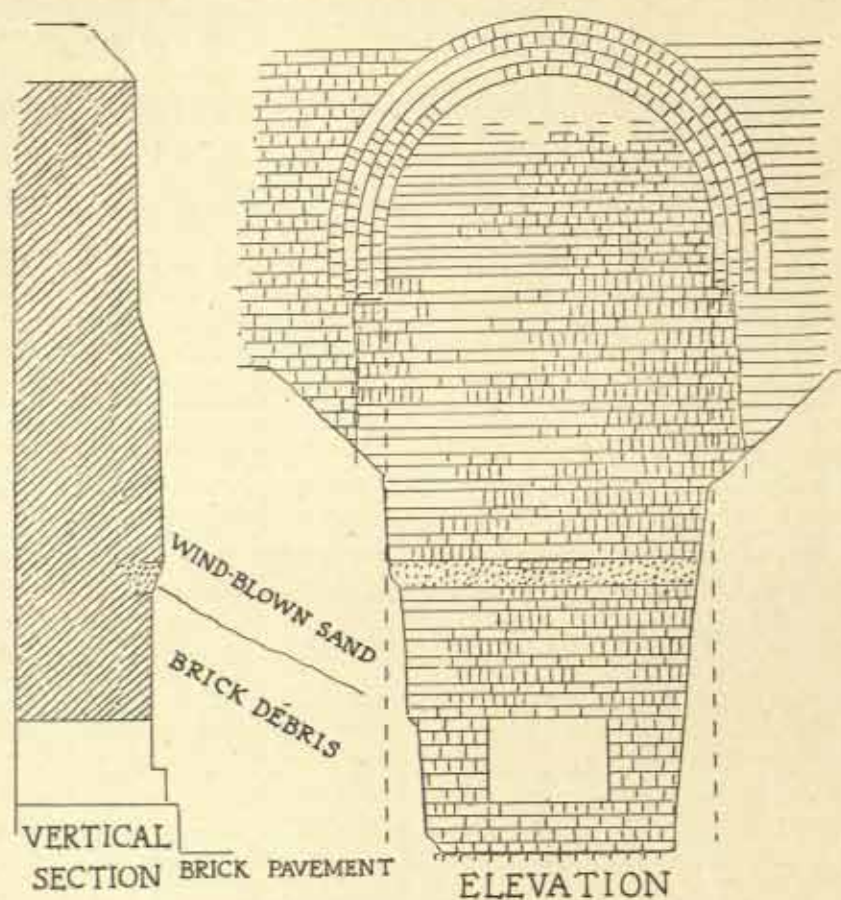
Scale 1/100

0 1 2 3 4 Metres

EL-KÂB: GATEWAY IN THE SOUTHERN GREAT WALL







EL-KÂB: ARCHWAY IN THE NORTHERN GREAT WALL

the Egyptian way of building. Where wood was scarce it was not used for scaffoldings, earth taking its place. An arch constructed of rings of brick on edge and set on a slope so that one ring lay against another did not need a support of wood or earth during the progress of its growth; but an arch of the kind that we use to-day, built in rings and having concentric joints, depended for its stability on the support within until the entire work was complete. In the case we are considering the brick arch had been thus built, and much of the earth scaffolding has remained in position. By constructing the wall with an arch in it, as here found, the continuity of the brick fabric was secured, and it was easy to build in the stone-lined gateways underneath without any disruption of the wall itself. The outer face of the arch was at a later time completely covered by a brick facing, and was thereby hidden. The inside face towards the enclosure was left open, blocked only by the earth "centre" on which the arch was built.

There is evidently a good deal of history in the brick filling of the archway as shown in Pl. XIII. Approaching from the north, we find a brick pavement; above this, for the whole width of the arch and extending some way inward, is a mass of well-laid large bricks of the same size as those of the adjoining walls and four courses deep. Over this, six courses deep and of the same brickwork, are the walls flanking the passage, already referred to. Then begins a change in the size of the bricks and the method of construction, as we find first a course flat and then a course laid on edge. This continues upwards nearly to the spring of the arch; but the section, Pl. XIII, shows a curious projection. In clearing the accumulation from against the wall-face it was found that, while the upper part of the mass was blown sand, the lower part was brick *débris*. Then came a stratum of coarse stuff in the wall itself. To what distance inward this went it is impossible to say; I declined to destroy any of the wall. On the surface at this level was a small fragment of brick-paving, and then the main filling-in wall was carried upward, but with the face a little in advance of the same work below, as in the section. Above this, the arch was filled in with bricks laid flat.

Can the explanation be that no stonework was put into this gate at the time it was built? When I excavated it, the passage was filled solid with good earth. Was there then an alarm, and was the wall above then commenced and carried up as high as the stratum of coarse stuff, the brick *débris* and earth being allowed to accumulate? With the persevering N.W. winds of the Nile Valley this would not take very long. Then, on a fresh alarm, was the arch closed and the wall afterwards completely covered with blown sand?

The brick wall closing the archway is, in outer elevation, wider than the way itself, as the angles of the great wall are a good deal broken. This leads one to suppose that the opening must have stood unclosed for some years.

The eastern gate has been closed at some time by a complication of cross-walls in brickwork, which clearly have nothing to do with the masonry and seem to have been built subsequently and at two different times. In the western gate of the north wall there are also complications of brick walls.

7. THE BREAKWATER.

There is a story that the Nile-bank immediately to the south of the Breakwater (Pl. XIV) formerly lay considerably more to the west than it does now (1920), and it is told that Sheikh 'Abdallah el-Maghraby¹, who is buried under a spacious dome at Hillal and is still held in much esteem, once possessed a donkey. This donkey broke away from its

¹ The Sheikh lived, as I understand, quite early in the last century.

moorings and, walking westward, began to feed on the growing crop of a proprietor on the river-bank. The owner of the crop, being enraged, made a paste out of the tenacious Nile mud and plastered this all over the offending donkey. At this the holy man was very angry, and foretold that the waters of the Nile would advance towards the east and would eat up the ground of the owner of the crop. And so it has come to pass.

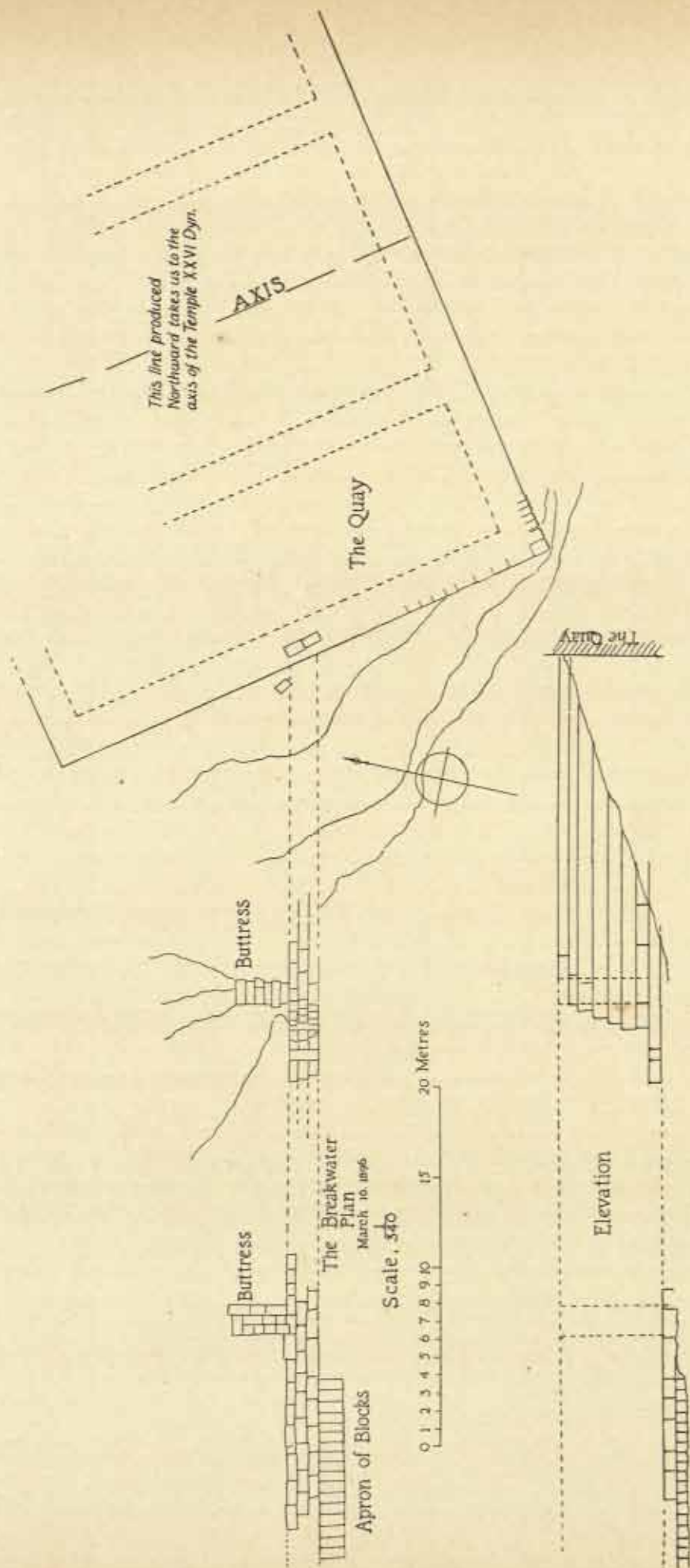
Notwithstanding the tale, there can be no doubt that the Nile-bank must have been much further to the east long before the period of the holy man and his donkey, since the Quay which still exists at the end of the dromos must, according to precedent, have stood with its wall-base in the water. Now there is but a corner standing in the Nile. The sequence of changes seems to have been, that the river was once further eastward than at present; since then it has moved further west, and now it is again eating its way eastward.

Since we possess at Karnak and, perhaps there better exemplified than elsewhere, also at Kalabshah, examples of the structure usually described by Egyptologists under the erroneous name of "Quay",¹ it will be useful to study here the customary arrangement of such monuments. Steps exist so as to give ready access from the ground-level down to the water as it rises or falls, but these steps do not land us upon the Quay but stand at a distance of a few metres from it on the one side or the other. Such steps exist at Kalabshah, also at Philae, and it may be that there are the remains of such at El-Kâb. I feared to dig for them, however, as the rather swift current of the Nile impinges strongly upon the ancient masonry; the Quay is now protected by very tenacious Nile-mud, and to expose more of the masonry than we now see might very easily lead to its destruction. The masonry of the platform is well-wrought, the stones being carefully placed and having clearly been built with a view to resisting the impact of a great body of water. They are, consequently, better bonded than is usually found to be the case.

But what is of great interest at this point is that we are enabled to recover a fresh leaf out of the book of local history. Projecting from the masonry platform above described into the river in an almost exactly westerly direction are the remains of a massive wall of wrought stone, the purpose of which is clear enough. That purpose was to hinder the further onslaughts of the river upon the inhabited and ancient town of El-Kâb. In April 1908, the Nile being then lower than is usual at that time of year, the masonry of the Breakwater was exposed far out into the river. I have been told that the Breakwater extended onwards in a continuous line from the stone platform, and that after doing so it curved towards the north, and so deflected the current of the Nile to the north-west. I have also been told that, after extending westward as above described, the Breakwater curved round in a loop, returning to the shore in a line with the prolongation towards the west of the south block of the Great Walls. On investigation, I was able to find no evidence of these curves. So far as could be seen, the blocks of stone were continued westward in a straight line. Had stones in other directions remained under the water, which is shallow at this point, we must have seen the ripples caused by them. We also travelled along in my felucca, sounding for evidences of a curve with a pole; but none revealed themselves.

The most recent history of the Breakwater that I can ascertain is that relating to its destruction, which was told me by the *ghafir* Suleimân already mentioned. He stated that, when he was quite young, certain boats came to the place, and a great number of stones

¹ The dictionaries tell us that a quay is "a landing-place, wharf or place for the reception of cargo," which the structures here under consideration clearly are not. The most perfect still retain their parapets and are in no way accommodated to the rise or fall of the Nile.



EL-KÂB: THE QUAY AND THE BREAKWATER

were overthrown with the help of crowbars and removed. The few remnants now seen constitute all that remains of the Breakwater, and the stones taken away "by order" were used in the building of the sugar works at El-Maṭaḥnah already alluded to. The earth stood up against the masonry, and was maintained by it on the north, or downstream, side. In support of this statement it may be seen that fallen stones still remain on the river-bed, but always to the south of the wall; none are found to the north for the quite sufficient reason that, at the time when the barbarity above described was committed, the solid Nile-mud was heaped up on that side, as it had been for at least two thousand years. Suleimân related that, very soon after the removal of the stones, the Nile began to wash away the ground and several feddâns of cultivable land were lost. The Nile is now forcing its way eastward, but happily the Department of Public Works is engaged in raising defences, so that, not only will further losses of land be prevented, but also the water will be hindered from encroaching upon the ancient site of El-Kâb. So far as I could ascertain, the Breakwater was carried so far into the stream as to cut the western line of the Great Walls, if produced towards the south. It may fairly be presumed that, before the Breakwater was built, the ancient town with its double walls was seriously threatened, and that the inroads were, at that time, so considerable as to persuade the authorities to move the inhabitants to the east, and accordingly to build the Great Walls where we now see them. The Breakwater was sufficiently efficacious to preserve much of the threatened ground on which the south-west angle of the Great Walls was built.

From PL IX it will be seen that a more or less rectangular structure, with projecting walls at the corners, was erected on the line of the destroyed part of the southern Great Wall. To line the building within, use was made of slabs of stone brought from more ancient structures, sculptured with figures in low relief and still bearing traces of colour and a little gilding. The style is "pulpy" and late; and no inscriptions were found to give any clue. After this building had been examined it was covered in again for its better preservation. I cannot think that it had any part or lot with ancient Egypt; nor would I like to affirm that it must be brought down as late as the Arab Conquest, as one would be inclined to suppose.

It is very important to bear in mind how completely an exceptionally high Nile may efface ancient buildings, if they be, as in Egypt they so often are, of mud-brick only. They just melt away. Agriculture also assists in the effacement. Until some forty years ago a considerable portion of the area enclosed by the Great Walls was under cultivation. The space lying eastward of the Temple Group and extending almost from the northern to the southern Great Wall was thus occupied, the many little mounds marking the presence of ancient tombs standing above the cultivation level. The soil is, however, very poor, a fact for which the archaeologist has every reason to be grateful.

To conclude with a brief description of the Quay and the Breakwater. The Quay is a solidly built structure, rectangular in plan and presenting a face of 37.0 m. to the Nile, while the sides measure 29.5 m. To give the masonry stability against the weight of the stream the space within is divided into three cells by two solid walls, these cells being tightly fitted up to the wall-tops with a very compact mass of earth which does not seem to be the ordinary Nile-alluvium. It is a compound partaking somewhat of the nature of concrete; it is possibly a mixture with *homrah*, which is hard and water-resisting.

It is possible that the afore-mentioned flight of steps giving access to the river lay to the east of the Quay, without touching it; had it lain to the west, we should have seen

traces of it in the Breakwater. This, starting from the west wall of the rectangular Quay, is a long line of stonework with counterforts at the back. It is not at right angles to the wall of the Quay, but is inclined considerably towards the north, deflecting rather than resisting the current. As an extra defence blocks of stone have been laid in a row, so as to reinforce the foot of the wall, and perhaps to prevent the current from burrowing underneath.

In none of the masonry of the Quay or the Breakwater do we find the courses to be other than horizontal; concave courses do not occur, as, for example, at Philae and in several cases in Lower Nubia. That the stonework of the Breakwater is in no way bonded in with that of the Quay does not at all prove that the structures were built at different times. A study of masonry in Egypt must convince any technically qualified observer that the careful bonding together of different parts of a structure, valuable though it is found to be among ourselves, was disregarded in Egypt. It is common to find that in the case of a wall two stones thick the faces were not connected by through-stones. One may observe in the temple of Luxor that the outer skin of such a wall has tumbled down while the inner is retained in its position by the weight of the horizontal ceiling blocks that it sustains. Observation of the quality and the tooling of the blocks in the Breakwater and the Quay makes it reasonable to believe that these were built at the same time, all forming a part of the very extensive remodelling of El-Kâb between the Twenty-sixth and Thirtieth Dynasties.

It is much to be deplored that this Breakwater has been so ruthlessly destroyed, and so recently; at the time of its demolition it was, as I believe, the only ancient example of hydraulic engineering on the Nile.

APPENDIX A.

GUESSES AT THE CAUSE OF THE DESTRUCTION OF THE S.W. ANGLE OF THE GREAT WALL.

It has been shown that but one angle of the Great Enclosure has suffered severely, and it would be of value to discover the cause of this. The damage that has been done cannot be attributed with certainty to encroachments of the Nile. A tentative history of the catastrophe can be suggested, but it must be admitted that the evidence is contradictory.

We must first think away the Great Wall, seeing before us the ancient town enclosed by its Double Walls, the Temple Group much smaller in size but standing in its present position, with the town lying to the west of it, and the Nile flowing west of the town, gnawing at its fringes. We should see the Double Walls, joining the Temple Enclosure on two sides, define the ovoid form of the town in their course towards the river (see Pl. X). Looking landward, we should see the desert coming up to the eastern boundary of the Temple Group; and north-east we should descry a range of tombs piercing the hill-side, between them and the town being a group of considerable mastabas and lesser graves now obliterated or covered by sand¹. The land lying to the east of the town was then, as now, *gebel*. As before described, the town was built on a mass of limestone detritus poured forth from the *wâdy*. From time to time heavy rains in the Arabian range of mountains between the Nile and the Red Sea descended through this *wâdy*, and continue to do so even at the present day. I have myself seen such an outburst of no little severity, and will now proceed to describe it.

The torrent was of a strong yellow colour, and so vehement was its roar as it dashed over its stony bed that even the loudest shouts were drowned. It followed its accustomed

¹ See QUIBELL, *El Kâb*, Pls. XXII-XXIV.

path in approaching the river, passing along the south side of the slightly rising ground on which the Great Walls stand, and cutting a deep channel for itself through the alluvium of the river-bank. The channel was from three to four metres deep and at least twenty metres wide. Through this the water rushed with deafening violence for three days, after which it began slowly to abate; but it did not cease to run until at least twenty-five days had expired. The place where it passed out into the Nile is a few metres to the south of the mass of masonry from which the Breakwater starts. I was informed that a flood of this violence occurred at intervals of about fifty years; the one I have described took place early in 1901.

It is very clear that those who, several thousand years ago, settled upon the ridge of limestone *débris*, must have known of the floods and have placed themselves safely out of the way. And so too those who built the town, its Double Walls and the later Great Walls. How then are we to account for the destruction of the south-west corner of the enclosure formed by the Great Walls, and when did that destruction take place? In seeking to answer these questions we must bear in mind that the danger from floods is far greater now than it was in times long past, the mean level of the High Nile being several metres higher nowadays than it was in antiquity, owing to the gradual raising of the river-bed through the deposition of alluvium. This being so, if we may suppose the S.W. angle of the Great Walls to have been destroyed by a torrent, its volume must have been far greater than it would need to be in order to do the same damage at the present day.

We are justified in believing that at the time the Great Walls were built, the Nile was considerably more to the west than it is now; our map shows that the angle of meeting of the western and southern portions is now completely submerged. The Nile, having first menaced and then demolished part of the ancient town, began by further advances to threaten the S.W. angle of the new enclosure. It was on account of this threat, perhaps, that the Breakwater was built. Then, at a certain moment, came the great tragedy. It must be realized that the conformation of the ground must have been very different from what we now see. Inside the Great Wall, the S.W. angle was solid with houses piled up as high as, and even overtopping, the Great Wall, and this mass was continuous until it reached the enclosure wall of the Temple Group. But there is a very weak point in my theory of torrents which I am bound to place before the reader. It is that the attacks from land-water, as distinct from rain, must begin at the base of the affected structures, and the ruins of the walls as they now stand do not show that they were thus attacked.

The alternative theory to that of violent destruction is one of peaceful speculation. We see, at the present day, that two angles of the Great Wall, the north-western and the south-eastern, have been attacked, the north-western angle having been cut down to ground-level for the sake of an irrigation channel. It seems incredible that such a clearance as we now find at the south-western angle can have been due to assault by an enemy, since an angle would scarcely have been attacked, the mass of material at such a point being greater, and consequently harder to deal with, than at any other point along the line. So my theory of "peaceful speculation" gains a footing.

If we approach the question on a peace basis and suppose that the materials of the wall were quietly removed for agricultural and domestic purposes, we must ask ourselves for what purpose this can have been done. The *sebbâkhîn* do not reject the bricks for agricultural purpose, but their preference is for disintegrated brick and for *débris* from houses and

buildings that have been used and occupied for very long. And yet we have learnt that the houses were piled high until recently. The nearest villages, Hilal and Mahamid, are by no means built entirely of large bricks from El-Kâb. Where bricks were wanted, why should they not have been taken from the nearest spot, namely the eastern part of the Great Wall? This has been done in the case of the *sebakh* for agricultural purpose, and the ancient town exists no more. To the north of El-Kâb the cultivable area is considerably larger than to the south, and yet the Great Wall has, on its northern side, been but little plundered, whereas on the southern side it has suffered grievously. At this point I must leave the problem in the hands of my readers.

APPENDIX B.

THE CONSTRUCTION OF THE GREAT ENCLOSURE FROM A TECHNICAL STANDPOINT.

A glance at the elevation of these walls (Pl. XI) will suffice to show that the manner in which they were built differs considerably from the methods employed in Europe. The photographs reproduced in Pls. XV—XVIII are most illuminating as regards this point. Pl. XV, top, shows the inner or eastern face of the western wall, where we see a panel with the courses laid in concave curves alternating with courses laid horizontally. The breaking away in the lowest portion is the result of dampness rising from below, large slabs of the wall-face sliding down, a phenomenon to which I shall return later. Pl. XV, bottom, shows a clearance of sand made from the south face of the north wall. Here we see the point of junction between a panel built with concave courses and one built with horizontal ones. The straight joint where the two systems abut is plainly shown, the face of the one panel advancing in front of the other. We further see, as also in Pl. XV, top, the holes marking the ends of the timber ties built into the walls and forming a species of gridiron. Two more photographs (Pl. XVI, top and bottom) represent the inside of the angle formed by the meeting of the eastern and northern walls, and show very clearly the convex and concave undulations of the courses, also the holes indicating the position of the timber gridiron ties. It is evident that the courses were not laid horizontally from end to end of the walls, but that the structure was divided up into sections, blocks or panels separated by straight joints. On one side of the straight joint the bricks are laid in horizontal or convex courses, and on the other side in concave courses.

What, it may be asked, was the reason for these peculiarities of construction? The question has not yet been definitely solved, but I will offer some suggestions that may help towards a solution. The walls of El-Kâb are 12.10 m. (40 feet) in thickness, and were about 11.0 m. (35 feet) high. This mass of material, the bricks composing it being laid in mud-mortar (*i.e.* a mortar without any lime, made of the same Nile-mud as the sun-dried bricks themselves), remains, even under the blazing sun and in the dry air of Upper Egypt, more or less subject to the laws governing fluids, and that for a considerable length of time after the completion of the work. The interior of a wall of 12.0 m. would not be dry and hard even in five or six years. As I have stated elsewhere¹, "in Upper Egypt, where the summer temperature often exceeds 100° Fahrenheit, and for weeks together seldom is below that mark, it nevertheless takes a crude brick wall of 0.75 m. thickness quite a

¹ *Journal*, III, 177.



The West Wall, Inner Face



A Clearance of Sand from the North Wall, Inner Face

EL-KÂB: THE GREAT WALLS



View into the North-east Angle



Another View into the North-east Angle

EL-KÂB: THE GREAT WALLS

year to get thoroughly dry and firm in its interior. This I assert from personal experience [and from the mouth of the builder], and not merely from hearsay."

Another very serious matter to deal with in a hot and exceedingly dry climate is the contraction of the brickwork as the water evaporates from it. Some device for avoiding the development of cracks due to contraction must be found, or in a solid wall of many metres in thickness and many hundreds of metres in length openings would develop in all directions. A further difficulty is that the outer face would become sun-dried and would form a hard crust, whilst the inside would remain soft for an indefinite period.

Men do not arrive at the ingenuities displayed in many Egyptian buildings, alike of brick and of stone, without many years of previous observation and experience. The wall at El-Kâb is free of cracks due either to settlement or to contraction, and we cannot doubt that its peculiarities of construction are the result of the experience and knowledge that had been acquired by its builders.

All the Nubian fortresses described in my previous article were built of crude brick, but none of them display undulating courses. Gridirons of timber ties are made use of there, whether they stand on rock or on a soil safely above the highest Nile, but no provision is made against the rising of dampness from beneath; the method of construction with mud-mortar, retaining some degree of fluidity for several years, as we have seen, was the main trouble with which the builders had to deal. At El-Kâb, at Karnak, at Abydos and elsewhere they adopted the system of undulating courses of brickwork, whereby considerable flexibility against anticipated movement was gained.

The method of building in crude brick so well exemplified at El-Kâb is not, I venture to think, assignable to any particular period. At Abydos, for example, the brick wall with undulating courses is attributed to Sesostri¹. On the other hand the brick wall enclosing Karnak must be quite late, and that at Edfû still later. The Great Walls of El-Kâb are, as I hope to have proved, a work of the Twenty-sixth to Thirtieth Dynasties. Besides these, there are many remains of a similar type of wall scattered about the country well worthy of examination and study. Archaeologists have devoted much energy to the study of pots and pans, a study undoubtedly of much value; but why should things structural be so much neglected, when they are of equal importance with the others alike archaeologically, historically and ethnographically?

Before we go on to consider the methods of building, let us enquire whence the builders of the Great Walls obtained their materials, amounting to many thousands of cubic metres. There exist in many places railway embankments demanding greater masses of material than have been collected at El-Kâb; but the skilful engineer so lays out his road that a cutting through a hill may provide the material for an embankment close at hand. This could not have been done at El-Kâb. The climate of Egypt does not by moisture and vegetable growth gradually heal up a large wound made in the face of nature; we should still see the gash, if there had been one made. It is clear that the Nile-mud must have provided materials for many thousands of bricks. But let not the reader who knows nothing of building operations in Egypt suppose that he may cut a mighty hole and take away the Nile-mud from any place in the river-bank he may fancy; the Nile would quickly revenge itself upon his ignorance. Those who have studied the statistical tables which show us how much solid matter is held in suspension in a cubic metre of rich Nile-water can realize the stupendous mass of

¹ PETRIE, *Abydos*, II, Pl. XLVIII, Fig. 3. Also GARSTANG, *El Arabah*, Pl. XXXVII.

material which passes down the Nile at every flood. At the right spot in the river-bank a very large hole may be dug and the contents removed therefrom, and at the next flood this hole will be completely filled up with a deposit of mud suitable for making sun-dried bricks; and this process may be repeated annually. On the other hand, a removal of the mud without due anticipation of the results may cause a serious deflection of the current, and may invite the stream to desert its previous course, with disastrous consequences.

It is evident that an immense wall such as we see at El-Kâb could not be built in haste; We have shown that the quality of the bricks forbade this. The fear of internal movement dictated to the builders the advisability of inserting a complete gridiron of wooden ties and of placing mats of grass or reeds between the brick courses; the semi-liquid mass had to be held together until it was hard and dry. It was also realized how essential, in order to facilitate the drying, it was to make air-passages through the heart of the mass. Without these precautions the wall would in a short time sink into a more or less shapeless mound.

In addition, it was necessary, having selected the place or places from which the Nile-mud should be taken, to find suitable spots for making the bricks near to the place where they were to be used; also such places as were well adapted for drying the bricks in the sun. Let us picture to ourselves for a moment all the bricks for these mighty walls laid out flat to bake in the sun. Let us not forget also the considerable loss that there must be in handling and transporting sun-dried bricks. This loss had to be avoided as far as possible. The river-bank close to which the walls were to stand was already occupied, for the most part, by the ancient town, and the cultivable ground lying north and south of the ancient town was also already in occupation.

Then there had to be made, beforehand, the vast quantity of grass mats, enough mats to cover the thickness of these walls not once, but fifty times. The quantity of wood demanded for timber-ties must have been gathered from far and wide.

These undertakings demanded most admirable organization, real feats of capacity, forethought and administration. Men having the ability to carry through wonderful schemes of this kind must have been available from very early times. Whether the business in hand involved the manipulation of granite, limestone, mud-brick or wood, or whether it consisted in the transport of tremendous weights and in the building of boats suitable for the purpose, one may look into the abyss of time and yet find these people ready to undertake and carry through successfully operations some of which would "give us to think" even in these days of advanced mechanical knowledge.

It seems almost inevitable that, before building operations began, several years must have been devoted to obtaining the Nile mud and converting it into bricks. The longer such bricks are in drying the harder they become. Probably as soon as they were sufficiently hard the bricks were stacked together, though without crowding, in the space subsequently to be enclosed. They would then have been handy for use.

Within the shelter of an Appendix I may perhaps be permitted to make a few observations with regard to the ancient methods of construction in crude, sun-dried brick. At El-Kâb very much of the ground on which the great weight of the wall was to be imposed must have been, at the time of the latter's construction, better isolated than it now is from moisture due to infiltration, seeing that, in those days, it stood higher than at present in relation to High Nile. The site consists, for the most part, of a limestone *débris* mixed with a yellow clay; this, when dry, forms a quite hard substratum. The eastern, and a considerable part of the southern and northern walls, stand on this dry base; but, as the river was approached,



North Wall, South Face



North Wall, South Face
EL-KÂB: THE GREAT WALLS



the builders took precautions against increased chances of dampness. For my own part, I believe that the courses of mats and timber-ties already referred to were primarily a precaution against the dangers inherent in the slow hardening of the mud-mortar, and were therefore of use in any part of the structure, but obviously such parts of the walls as were near to the moist ground (moist at High Nile) would dry and solidify more slowly than those parts removed from this danger.

Pl. XI, together with the various photographs, demonstrates how the mass of the walls was divided into sections. The west wall, as we see, is more subdivided than the others. The ideal aimed at was, as it seems, that a straight joint should exist between each block; and it may be observed that, wherever there was to be a gateway, this has a panel to itself, doubtless in order that works of repair might be carried on without shaking the adjoining structure of the wall. It has been suggested that the walls were built with concave or horizontal panels first, and that the intervening spaces were subsequently filled with the convex panels, which when new would undoubtedly sink downwards in the middle of the curve and so press home upon their neighbours. This theory of Professor Petrie's seems an admirable one. Perhaps a study of walls older than that at El-Kâb might show that they were always built that way, but at El-Kâb we find such a system in its integrity carried out only in a portion of the west wall. Elsewhere a convex and a concave panel were usually built in one, although at first sight it may not appear so. Each panel is distinguished from its neighbour by the disposition of the face, one panel in advance and the next recessed. At El-Kâb the actual straight joint was so treated, but an indication of one is not always to be trusted. We find, also in the west wall, that at least four or five panels were built at the same time; this is proved by the fact that the several courses, one superimposed upon the other and extending through four or more panels, are made of bricks of a clay differing from that of their neighbours.

I have also observed that pieces of the wood gridiron pass across a straight joint, which, were it a true line of separation, could not be the case. In Pls. XV, XVII and XVIII, bottom, the points of contact where two panels meet is very clear. The decay of the eastern face of the west wall, resulting from the destruction of the lowest courses by moisture and the consequent collapse of the courses above them, is well shown in Pl. XV, top. Pls. XVII, bottom, and XVIII, bottom, show the same decay in a lesser degree. Pl. XV, bottom, shows a part of the wall-face in admirable preservation, and also the flight of steps giving access to the wall-tops. A stairway similar to that in the north wall is found in the proximity of each ramp. For a reason that I am quite unable to explain the steps stop short of the ground-level by several metres, and there are no marks on the face of the wall to indicate that they were continued downwards in wood. Rising at right angles to the face of the wall we advance inwards up eight steps, and then turning at right angles, in every case to the left, we mount to the top of the wall. In Pl. XV, bottom, a man is shown standing on the middle landing. In no case is the topmost step to be seen, as friction by sand has worn down the top of the wall sufficiently to destroy the highest step or steps. In the section it is shown that the entire stairway was built of crude brick, and to give permanence to the steps themselves, which must, in so soft a material, have been quickly worn by use, the "nose" of each step was made of a stout piece of wood, the marks of which are still to be seen in the side-walls.

When the examination of the north wall was begun, the mound of blown sand covered the southern and northern faces quite to the top, and there was no sign of the stairway.

When the sand was cleared away from it a remarkable feature presented itself: there was not the slightest sign of use in the not very resistant brickwork, even at the angle where the two flights of stairs meet. The wooden nosings had been eaten by white ants, as the remains in the side-walls clearly showed. The mounds of sand, as many indications prove, had been permitted to accumulate from the very hour in which the building was finished—so far as it was ever finished at all. Though the inhabitants remained in the old town and did not spread into the newly enclosed space, here and there a small isolated building was erected, including a pigeon tower of solid construction. I imagine that for many centuries the walls were never put to any defensive use. Then arose an occasion for filling with brickwork the eastern, or desert, gate, as well as that in the north. The N.E. angle of the enclosing walls was protected by a massive buttress, perhaps to cover some older damage. The south gateway retains its stonework so perfectly that it also may be fairly conjectured to have been completely built in and so to have remained until much later times, when it was ultimately cleared in order to permit a water channel to be carried through it for the purpose of irrigating the crops grown within the enclosure. If the town of El-Kâb died out, as it seems to have done, far back in the Middle Ages, the enclosing walls would never have been put to the test of a siege, as there was nothing within to be captured. The sand has preserved the original wall-face in such a way as to prove that the neat array of headers and stretchers which it presents was never coated with plaster or whitened with lime. Not a fragment of any such coating has revealed itself.

M. Choisy, in his book entitled *L'art de bâtir chez les Égyptiens*, discovers in the face of the walls of El-Kâb a whole system of timber scaffolding and of putlog holes, and illustrates these in some charming little diagrams (p. 31). But of what use would such scaffolding be to a wall 12·10 m. (40 feet) in thickness? The old Egyptian way of building continues to this very day; the barefooted workmen stand on the wall itself, and the labourers bring the materials up to the top of the wall. Thus all the workers rise as the wall rises. Even with a wall of 0·75 m. in thickness, the men walk on the wall-top, and indeed their weight helps to solidify the structure. If there had been scaffolding, we should find on the ground at the foot of the walls many broken bricks, much mud-mortar, etc.; and in spite of my searching for such remains in many places I have found none.

In Pl. XVIII, top, we see one of the great ramps leading to the wall-top. This ramp, the most perfect of all, is near the middle of the length of the eastern, or desert, wall. Its width is sufficient to allow five or six men to walk up it abreast. Judging by its method of construction with the courses laid, not horizontally, but on a slope, and not bonded in any way, we may surmise that it was not constructed until the wall was carried to its full height.

In Pl. XVI, bottom, we see the N.E. angle, the meeting-place of the eastern and northern walls. The eastern wall is in shade; the vertical gashes with which its face is scored are due not a little to the action of the sand-carrying wind, which has ground away the face to a considerable depth and has so created many weak spots, as, for example, where the exposed ends of the timber gridirons have rotted or been eaten away so as to give a leverage to the wind. Both the east and west faces of this wall are much favoured by birds, foxes, jackals, etc. Running in from the desert at night they clamber up the outside, and, scrambling down inside, make their way to the river to drink. The north wall has suffered but little. The undulating courses of brickwork are very clearly seen in this photograph. The collection of *débris* against the east face of the east wall is very considerable, and has



The Ramp in the East Wall



The West Wall, Inner Face, at the Point where the Double Walls touch it

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completely buried beneath it an irregular line of small buildings which seems to have been of the nature of watch-houses, shanties, etc. As soon as the crumbled brick and sand forming the *débris* had collected to a considerable extent, this formed an inclined plane along which the desert animals could easily make their way over the Great Wall. This, in my opinion, has been going on for thousands of years, in which length of time even such humble animals as foxes or jackals can do considerable damage.

I am indebted to my friend the late Mr H. R. Parker for the excellent photographs here reproduced.

NOTE. In a subsequent letter Mr Somers Clarke has expressed a wish to have the technical word "groyne" substituted for "breakwater" where the latter occurs in the article and plans. As the plates had however been already made the word "breakwater" has been allowed to stand in the text also, to avoid confusion. ED.

MAGAN, MELUĦA, AND THE SYNCHRONISM BETWEEN MENES AND NARÂM-ŠIN

BY DR W. F. ALBRIGHT

THE propositions advanced in the paper, "Menes and Narâm-Šin" (see *Journal*, VI, 89-98) seem to have called forth a number of expressions of opinion (see especially *ibid.*, 295 foll.). This was to have been expected, and no one is more willing than the writer to withdraw views which have been shown to be devoid of foundation. I will, therefore, at once recant my impossible localization of Tībar in the Antitaurus, since it certainly belongs in the Zagros, east of the lower Zab, in the land of Arman-Alman¹, as became evident before the paper was printed. However, this error does not affect the unquestionable fact that Sargon and Narâm-Šin² extended their conquests well into Armenia and Cappadocia, as vouched for both by the inscriptions of these monarchs and by later tradition (the *šar tamḥari* saga). Professor Sayce's remarks on Ibla and Yarmuti are interesting and may be correct; I am unable to control them because of lack of the necessary books here in Jerusalem. Not having access to a copy of the Tuthmosis list for northern Syria³, I must accept Professor Sayce's reading of Nos. 298-301 as Ursu-Arsos, Mari, Ibla, and Qarmatia (?) on faith. However, though the combination of Gudea's Ursu with the Hittite Uršu (pronounced Ursu) is evidently right, and Jensen's combination with Arsos, modern Arsuz, on the Râs el-Ḥanzir, north-west of Antioch, may now be considered reasonably certain, it should be observed that the identification with an Egyptian "Arsha" is hardly likely, as the sibilants are wrong. Another identification is in order; Arsos, which commands the Gulf of Issus, is surely the Hittite Arzawa, which the insight of Hugo Winckler has already

¹ For Arman-Alman cf. SCHEIL, *Délégation en Perse*, v, 76, and OLMSTEAD, *A.J.S.L.*, XXXVI, 134. This region can hardly be connected in name with Holwân, as often thought, but, on the other hand, is probably the source of the later name Armenia, appearing as Armina in the Achaemenian inscriptions, as first suggested by Scheil. In Assyrian times the district of Man lay directly north, to the south of Lake Urmiah. I find it very difficult to avoid connecting the land of Manium or Manum with later Assyrian Man, both of which may be shortened forms of the earlier Armanum or Arman. When the Persian tribes pushed north-westward towards Armenia, they first came into contact with the peoples of Man-Arman, who, as we know, were closely related in race to the Chaldeans of Armenia. The survival of this name is no more remarkable than that of the name Persia, which first appears in the time of the dynasty of Akkad as Parāše, ideographically *MAR-ĦA-ŠI-KI*, in Assyrian times as Paršua, pronounced Parsua, and in Achaemenian times as Parsu, thus properly a place-name, and not a tribal name, originally referring to the central Zagros.

² The correct form of the divine name Šin is *Šin*; the Assyrians interchanged the sibilants, as usual. The older form is found in South Arabia, among the Amorites, and in Aramean transcriptions of specifically Babylonian names, while the Aramean reproductions of Assyrian names invariably change *š* to *s*. Haupt's explanation of the origin of the name, as a Semitic word, is thus correct, and the prevailing combinations with Sumerian Zu-en, for En-zu, "Lord of knowledge," the Sum. name of the moon-god, are nothing more than old punning explanations.

³ MARIETTE's *Karnak* and TOMPKINS' study in *Trans. Soc. Bibl. Arch.*, IX are unfortunately not to be had. A special copy was made for the British School of Archaeology, but only extends as far as No. 205.

located in Cilicia¹. The Boghazkeui text where Uršu appears is written in Assyrian, like the Mattiuaza treaty, and so we have the proportion *Uršu : Arzawa* (only in Hittite texts) = *Alše : Alziya* (only in Hittite texts), with which compare the proportion *Arzawa : Arsos = Tarz- : Tarsos*. The Assyrians inverted the Babylonian values of the sibilants *s* and *š*, as is well known, and in the Boghazkeui tablets the northern practice usually prevailed, though sometimes Babylonian scribal influence won the upper hand; in the Amarna correspondence we find an almost hopeless mixture of both representations of the sibilants. The Egyptians employed *t* to write foreign *s* and *š*, but were very inconsistent about using *s* and *š* for foreign *š*. As they seem to have occasionally transcribed their geographical lists from cuneiform models, a good deal of unnecessary confusion arose. Our *Ursu-Arzawa* is evidently identical with Eg. *ḫ-rḫ-ḫ* captured by Ramesses III (BREASTED, *Ancient Records*, IV, 70) which is quite distinct from *ḫn-n-rḫ-ḫ* or Ullazi. On the other hand, Eg. *ḫ-rḫ-ḫ* is certainly not *šy-Alašiya*, as generally thought, since in a list of Ramesses II they occur side by side, but is probably, in spite of the inconsistency in the use of the sibilant, Ursu-Arzawa, or the strip of territory between the Amanus and the Gulf of Issus. For the change of vowels, cf. *Urbel-Arbail-Arbela*. I confess to a very serious doubt as to the identification of Nos. 299-300 in the Tuthmosis list with Mari and Ibla, though the latter probably is not Byblos, as I thought, but refers, as Jensen and Sayce hold, to the southern flank of the Amanus. The combination of Qarmatia (?) with Yarimuta and Yarmuti is inadmissible. *Per se*, one has every reason to look for the Yarmuti of Sargon the Elder in northern Syria, and the identification with classical Armuthia is very attractive². But the letters of Rib-Addi of Byblos regarding Yarimuta leave no loophole for such a combination; I have gone through them again with the utmost care, and am more convinced than ever that this Yarimuta is south of Carmel, and represents either the Delta, as Niebuhr supposed, or the Plain of Sharon, the latter alternative being much the more probable. Northern Syria has plenty of wood, is not a grain-producing country, and was not under Egyptian domination, as Yarimuta certainly was. When Rib-Addi says (EA 105) that he is between "the devil and the deep sea," the Arvadites not permitting his ships to go even as far northward as Simyra, while Yapa-Addi (Semitic, not Hittite name) prevents them from going to Yarimuta, it is evident that Yarimuta lay southward, and was probably, in accordance with our information concerning Yapa-Addi, outside of Egypt proper.

These geographical questions are subsidiary, even irrelevant, to the main problem, the location of Magan and MeluḤa. So far from finding my position shaken, it seems to have become much stronger, thanks to new material. Professor Sayce objects to the identification of Magan with Egypt, because it is called the mountain of copper, *i.e.* the land of copper. Now Egypt was certainly one of the lands where copper came first into use, and where its use was most widespread; the paleolithic age in the Nile Valley was followed directly by an aeneolithic, the neolithic proper being apparently non-existent in this country. Copper came to Egypt from two sources, the mines of Sinai and the mines of the Nubian desert, south-east of Aswān. The Babylonians would most naturally derive copper from these

¹ This disposes of Grimme's ingenious combination of *Arzawa* with the old name of Edessa-Urfa, Orrhoe, Urhai, which is probably Arabic **aricai*, "antelope," employed as a tribal name, as previously thought.

² I confess to having been totally unable to find Armuthia in any of the early geographers or modern handbooks.

sources by Egyptian intermediation. Professor Sayce's suggestion that Magan was Makna, in Midian, does not appear more likely than that the Hebrew *yam sūf* was the Gulf of 'Aqaba. Why the Sumerians should have regarded the desolate land of Midian as so important, and yet have completely overlooked Egypt, is not explained. My suggestion that *Magan* reflects an original *Ma'an* is naturally hypothetical, but it is undeniably true that the common Hebrew and Arabic place-names *Ma'an* or *Ma'in* are identical with *ma'an*, "watering-place, encampment," and *ma'in*, "water flowing upon the face of the earth" (i.e. well-watered region) whence the denominative verb *ma'ina* means "be well watered." The writing *mā* (ideographic for ship) instead of *ma* may point to a Sumerian compound, as Haupt believed, but it may also be due to a sort of popular etymology.

The question of Magan has been recently discussed by Kmoskó in *Zeitschrift für Assyriologie*, 31 (1917), 61-64, and by Ungnad in *op. cit.*, 262 foll. Kmoskó objects to the identification of *meskannu*-wood (Sum. *muš-Magāna*, "tree of Magan") with *Acacia Nilotica*, proposed by Haupt. He points to the fact that Ilu-ibnī, governor of Šūhi, on the middle Euphrates, gave *meskannu*-beans and furniture made of this wood to Tukulti-Inurta II (so read), and says that the ruler "eines elenden Nomadendorfes" could not have secured this wood. But the *Acacia seyal*, to which the Hebrews extended the term *shittim*, a loan from the Egyptian word *šnd* for *Acacia Nilotica*, grew in Arabia as well as in Egypt, and, as we know from the Pentateuch, was the favourite wood in the desert for cabinet work. Moreover, Šūhi was at that time a very important caravan centre, and not a miserable Bédū village. Kmoskó identifies Magan with the Jebel Aḥḍar in northern 'Oman, and Meluḥa with southern 'Oman, but does not discuss the paradoxical consequences arising from such a theory. Ungnad anticipates my independent identification of *kīsu* with papyrus, and happily suggests that Sum. *gis, gis* is a loan from Eg. *gīš*, "reed," though he admits the difficulty of assuming that *kīsu* is a loan from Sumerian, since we should then expect *kīšū*. However, we must naturally suppose that *GI-ZI* is a pseudo-loan from Semitic *kīsu*, itself directly borrowed from Egyptian. The change of sibilants is due to a dialectic peculiarity common in Old Akkadian.

Magan cannot be situated between Syria and Babylonia, as Professor Sayce now suggests, since the ships of Magan and Meluḥa are mentioned along with the ships of Tilmun = Bahrein in the southern part of the Persian Gulf. The identity of Tilmun with the largest Bahrein island, Owāl or Sāmak, is now made even more certain by Meissner's discovery (*Or. Lit. Zeitung*, 1917, 201 foll.) that the Babylonian name *Tlwn* (*m* and *w* fall together in Babylonian, as in the modern Arabic of Baghdad) is preserved in Syriac sources in close connection with Hagar, the ancient capital of Bahrein, Muḥarraḡ, the second largest island of the group, and Ḥaṭṭ, the Arabian coast opposite, so may have been the ancient name of Manāmah, the northern seaport of the island. Hence Magan and Meluḥa are clearly accessible from the Indian Ocean. In Nies's new volume, *Ur Dynasty Tablets*, No. 84, 6, the courier Akalla is furnished with food to set out on a journey to Magan (with letters from a king of the Ur Dynasty?) but the length of time required by the trip is not specified (*sic*); other messengers go to Susa. The goats of Magan, mentioned in LANGDON, *Drehem*, No. 13, and *Rev. d'Assyr.*, 9, 51, are presumably a choice variety of Egyptian goats. The list of kings conquered by Narām-Šin, given in a text published by Boissier in *Rev. d'Assyr.*, 16 (1919), 160 foll., is perhaps chronologically, but certainly not geographically arranged. Professor Sayce's statements that Marḥaši is Mar'as in northern Syria, and that Mardaman is Syria, can hardly be maintained; both districts are in the Zagros

Mountains¹ and *MAR-ĤA-ŠI* is proved by an Assur vocabulary to be the ideogram (i.e. older form) of *Par'aše*.

The alabaster vase mentioned *Journal*, VI, 295, bearing the inscription "*Narām-Šin, king of the four quarters, a vase from the booty of Magan*," belongs to Dr J. B. Nies, of Brooklyn, the distinguished Assyriologist and antiquarian. Fragments of alabaster vases with similar inscriptions have been published in *Dél. en Perse*, IV, Pl. I, No. 1, and *CT*, 32, 8, 104, 418. Would Kmoskó maintain that alabaster vases of this well-known Thinite type were manufactured about this time in Oman? There is nothing in this against Sayce's theory, since Egyptian vases might easily have been imported into northern Syria.

My remarks *à propos* of Meluĥa must now be modified in the direction indicated already, *Journal*, VI, 295. According to a mining engineer who has been repeatedly through this region, the mountains between Nubia and the sea are cupriferous, and rich in copper carbonate or malachite, which occurs as incrustations in connection with ore deposits. The identity of Assyr. *sāmtu* with Eg. *mfkšt*, "malachite, turquoise," may be regarded as absolutely certain; see the references given *Journal*, VI, 90, n. 7. A list from the time of Ramesses II (MÜLLER, *Egypt. Researches*, II, 87 foll., 91) distinguishes between two mountains of malachite, one in Africa, and one in Asia, and other texts (*ibid.*) also bring malachite from the eastern desert. The clinching proof is given by *Gudea, Statute B*, VI, 38 foll., which states that the patesi of Lagaš brought gold-dust from Meluĥa. The Egyptian gold land, *par excellence*, was the mountainous region of the Nubian desert, from the latitude of Esneh southward to Abyssinia (cf. REISNER in *Journal*, VI, 79 foll.), the hinterland of Eg. Punt (*Pwnt*), from which the Egyptians brought gold-dust. Elsewhere I hope to show that Ophir is certainly equivalent to *Pwnt*, as scholars are coming more and more to believe. Suffice it to say here that, like Meluĥa and *Pwnt*, Ophir furnished gold and malachite. In Gen. x, 7, 29, Havilah is placed beside Ophir, and referred once to Africa (Cush) and once to Arabia (Joktan). As we know, in the first millennium B.C. both sides of the Red Sea were occupied by closely related tribes of Arabic race, in Africa superimposed on a substratum of Hamitic peoples, a fact which gave rise to a sad confusion in the Jewish mind. Ophir seems to be equivalent to the modern Afar, the land of the Danakil of Eritrea, west of Bāb el-mandeb. Just south of this district, on the Gulf of Tajura, lay the place called Aualites in the *Periplus* (cf. GLASER, *Skizze der Gesch. und Geog. Arabiens*, II, 195), which is probably Havilah. At all events the word *Ĥawilah* is not to be connected with the specifically Hebrew word *ḥól*, "sand," but with the Ar. *ḥwl*, "go round." In Ḥaḍramūt *ḥawillā* is a "little boundary wall encircling a field," so *Ĥawilah* may have been originally a word meaning "dyke, shore." That Analites corresponds in part to *Pwnt* is indicated by the fact that according to the *Periplus* a specially good kind of myrrh was exported thence; Pliny calls the troglodyte myrrh the best. The "peacocks" imported along with *gṗw* apes (Heb. קפיים) from Ophir by Solomon are in reality, as has been seen, *kyy* apes (תוכיים). The *algum* tree is probably *Acacia arabica*, from which gum arabic is derived; the *al* is the Arabic article, though the word **kumm* (cf. *kamkām*, "gum mastic") from which Gr. κόμμι and Latin *gummi* are borrowed, has been apparently lost.

My combination of Meluĥa with Malao is not much better than the old one with Meroe, adopted doubtfully again by STRECK, *Assurbanipal*, III, 795. Meluĥa is certainly not

¹ Mardaman appears in NIES, *Ur Dynasty Tablets*, No. 92, 24, along with Šanum and Rimuš, both unknown places, and Tilmun. The name is clearly of "Caspian" origin, as appears from the ending *an*, found in so many place-names in the Zagros, e.g. Arman-Alman, Padan, Zaban, Awan, Anšan, etc.

Amalek (!) with Grimme, nor has it probably anything to do with the Munuchiatis of Sinai (MORITZ, *Der Sinaikult*, Berlin, 1916, 10) though the form is phonetically almost identical (in Semitic *n* and *l* frequently interchange in proximity to *m*). On the other hand, the name is almost certainly preserved in the old word for gum resin, bdellium (a product of Havilah), which appears in the forms *bedôlah* < **bedulh* (Heb.)—*budulhu* (Assyr.), *βολαχον*, *βδολαχον*, *μαδελαχον*, *βδελλιον*, etc., *maldacon* < **madalcon*, *brochon* < **blochon*, etc. GLASER, *op. cit.*, 365, states that gum resin is still called *amloh* in Zafar (Biblical Saphar), south-eastern Arabia. The source of all these forms is evidently **mdulh*, from which alone they can be all derived. Sum. *meluha* stands then for **mdluha*, which the Sumerians could naturally not pronounce. Whether *ME-LUH-HA-KI* is the "land of bdellium," or the latter is the Meluḥean product, I will not attempt to settle; the word is presumably Hamitic, certainly not a known Semitic formation (using "Semitic" in the narrower sense). If one wishes with Hommel to derive the *μολοχιτης* of Theophrastus from Meluḥa, we can only say, so far as our own theory is concerned, "*Ahlan wa-sahlan!*"—Meluḥa would then be originally a place-name. But when Hommel wishes to bring in modern "malachite" and Egyptian *mḥst* we can only repeat the pious "*Allāhu ḥēr el-'ālimīn*." It may be added that in NIES, *Ur Dynasty Tablets*, No. 64, 12, we have a man named Ur-Lama, son of Meluḥa, perhaps a slave from Eritrea.

It is difficult to see how Professor Sayce can say that the equation Meluḥa = Kāši (Kasi is northern spelling) in the Amarna letters is based solely upon Knudtzon's conjecture as to the reading of a single broken passage. Kāši and Meluḥa interchange repeatedly, and where others use Kāši in referring to the Sudanese mercenaries of Egypt, employed as *zaptiyes* in Palestine, Rib-Addi nearly always speaks of troops from Mišri and Meluḥa (*e.g.* EA, 70, 112, 118, etc.). In the Boghazkeni text i, 15 + 19 (*cf.* MEISSNER in *Zeitschrift der Deutsch. Morg. Ges.*, 72, 42) the Meluḥ(h)a also appear as mercenary troops on the Egyptian side. The English have found that the men of the Sūdān make the best mercenary troops in the Near East, being stalwart in frame and famous for their bravery and loyalty. The Arabs, with whom Winckler and his pupils identified the Meluḥḥa, are notoriously poor allies, and useless as mercenaries. In the Esarhaddon and Assurbanipal inscriptions, Magan and Meluḥa certainly correspond to Egypt and Ethiopia respectively, and the men of Meluḥa are called *šalmūti*, "black"; see STRECK, *op. cit.*, III, 794 f., who terms the use of these names in place of the then current Mušr and Kūš archaic—rather archaistic, like Ḥanigalbat, Subartu, Aḥlāmē, Gutium, etc., in Assyro-Babylonian texts of this age, or *Eg Kftyw* for Phoenicia and *Amôr* for Syria in late inscriptions. In Mesopotamia of the seventh century, as in contemporary Saite Egypt, archaizing was in vogue; while scholars and courtiers attempted to turn back the wheels of time, the common people gave up Assyrian and Babylonian for Aramaic as their vernacular tongue, and patriotism declined.

Having stated the new geographical evidence, let us turn to the vexed subject of chronology again; I see no reason for modifying the results previously obtained in any respect. The reduction of Egyptian chronology by assuming an average of fifteen years for each legitimate reign from the first dynasty to the fifth inclusive is exactly in accord with the Babylonian material, as pointed out in my previous article. To take later periods, in Babylonia during the Kossean dynasty 36 kings ruled 576 years, or 16 years each. The next 40 kings rule 434 years, or 11 years each. The 55 kings of Assyria from 1500 to 606 rule 16 years each, nearly all of them following in regular genealogical order, though it must be observed that our lists are perhaps incomplete. In Egypt some thirty rulers of

the XVIII-XX Dynasties rule 490 years, or an average of 16 apiece. The Twelfth Dynasty in Egypt, with its average of 27 years, remains phenomenal, like the contemporary first and second dynasties in Babylonia, whose monarchs register an even higher average.

That we have not erred greatly in estimating the interval between the Sixth and the Twelfth Dynasties appears from additional calendrical considerations. Petrie (*Researches in Sinai*, p. 174) points out that the great tablet of Phiops I at Wādy Maghāreh is dated on the 6th of Mesorē, in the 37th year, which according to his chronology would be 4131 B.C., so the 6th of Mesorē would fall on the 24th of May. Now on p. 169 he tabulates the known dates on Egyptian tablets at Sinai, which lie on Jan. 19, Jan. 29 \pm 15 days, and March 9. The other three are not certain, so had better be left out of consideration; two are in March, the third in May, if Petrie's identifications are right. Hot weather in Sinai begins in April, and May is torrid, so was avoided then as now, as is shown by an inscription of Amenemmes III (p. 170). Petrie's date for Phiops I then becomes very improbable; that he considers it a support for his chronological theories looks like a *lucus a non lucendo*. Breasted's date, about 2575, brings the 6th of Mesorē about three weeks earlier, to May 3, and Meyer's date, c. 2490, takes us back to about April 12, still decidedly late. Ours, however, gives the date Feb. 10, at an ideal time of the year for work, falling precisely at the mean of the certain dates preserved. A better confirmation could hardly be desired, short of absolute proof.

In some respects Babylonian chronology is in a better condition, but even here there has been a recent attempt by Weidner to upset the system erected by Kugler, and endorsed by Eduard Meyer, among others. After a careful study of the material, including especially the new Assyrian royal lists published by Weidner and Schroeder, I have found so many serious blunders in Weidner's work as to vitiate his results completely. My conclusions will be published elsewhere; it is enough here to say that Kugler's results appear certain, with a very small margin of error, from the chronological point of view alone. Astronomically, Pater Kugler's accuracy and ability are undoubted; Weidner, though unquestionably brilliant, is notoriously careless and inexact, as his numerous "howlers" have too often demonstrated. We may, therefore, consider the date 2475 for the beginning of the Ūr dynasty, fixed by Thureau-Dangin in 1918, as certainly approximately correct, and perhaps right to the very year. The situation is then left as outlined in my former article, except that we gain ten years (2475 instead of 2465). In the preceding dark period, between the expulsion of the Guti and the commencement of the Ūr dynasty, we have a dynasty of Erech, and a contemporary series of ten autonomous patris of Lagas, as well as a dynasty of Adab, so we can hardly allow less than 150 years for the total length of the interval, bringing Sargon I to a probable minimum of 2975, a date which can hardly be far wrong. So far as I can see at present our chronologies agree with the supposed synchronism in the best possible way.

It cannot be emphasized too strongly that Egyptian and Babylonian civilizations were nearly coeval in development, though the former seems to have excelled artistically and the latter commercially. Both in Egypt and Babylonia the thirtieth century B.C. was a period of great artistic and political expansion and growth. Breasted's remarkable discovery of some ten predynastic kings wearing the double crown of Upper and Lower Egypt on the Cairo fragment of the Palermo Stone shows what we must expect; Menes came at an advanced stage, if not actually late in the record of organized government in Egypt. This discovery eliminates the reason for my doubt regarding the contention of Breasted and Meyer that the Egyptian calendar was introduced in 4241 B.C. The Mayas of Central

America had a calendar long before they had advanced to the comparatively high state of civilization found in Thinite Egypt. On the other hand, it seems clear that there really was a great readjustment of the feasts and regulations of the calendric synchronisms at the beginning of the next Sothic cycle, in the reign of Kechoos of the second dynasty, 2780 B.C. The cult of Apis, god of the Nile, said by later traditions to have been introduced by Kechoos, was intimately bound up with the calendar, through the association of the periodical changes of the Nile as well as of the calendar itself with the heliacal rising of Sirius. The shifting of the calendar completely upset the astral and agricultural setting of the important festivals, so the reharmonization of the calendar with the seasons naturally involved a readjustment of the feasts, which to later generations might seem as the first introduction of the latter.

Borchardt's discovery that Athothis, Menes's successor, carried on a campaign in Syria (*Mitt. der Vord. Ges.*, 1918, 342), presumably not the first invasion of Asia by a Pharaoh, shows what we may expect in the way of international rivalries and relations in the thirtieth century. I find it difficult to understand why one should doubt the possibility of an invasion of Egypt by Narām-Šin, when this was successfully accomplished by Esarhaddon and Assurbanipal, whose capital lay farther away. If it is objected that these early kingdoms were insufficiently organized, one can only point to the great empires of barbarians, like Attila and Jenghis Khan, or the Inca Tupac Yupanqui. Now that the latest finds are throwing light on the transfusion of culture between Egypt and Babylonia in predynastic times, and the remarkable researches of Newberry are showing that the real centre of early Egyptian civilization was in the Delta, there is no excuse for imagining a total lack of communication between Egypt and Babylonia down into the second millennium. We may never find a correspondence between the Thinites and the monarchs of Akkad, but we may safely expect interesting details regarding their warlike relations. Even to the Babylonians, Menes was a redoubtable sovereign, who deserved the honorific title *dannu*¹.

In conclusion, Magan is Egypt, perhaps including Sinai and the coast of the Red Sea as far south as below Qoṣṣêr; Meluḥa refers to the region known to the Egyptians as *Pwnt*, and to the Hebrews as Ophir or Havilah, as well as its hinterland, Nubia. Manium, Manum, or Mannu, king of Magan, is Menes of Egypt, who ascended the throne of united Egypt about 2950 B.C. It may be observed that the dates I have suggested agree almost exactly with those given by the two distinguished Egyptian archaeologists, Newberry and Garstang, perhaps the most careful and methodical of all students of Egyptian archaeology, in their *Short History*.

¹ As Professor Sayce says, it is quite true that *dannu* is never affixed to an Assyrian royal name before the title *šarra*, but in the early period it is regular. Not only do the monarchs of Akkad call themselves regularly *X dan(n)um*, *šar Akkad*, or *šar kibrāt arba'im*, but we find also, e.g., *Esar dan(n)um šar Adab*, *Lasirab dan(n)um šar Gutî*. Père Dhorme has called my attention to the fact that we find the same usage among the Hittite kings; Subbiluliuma is called *Šubbiluliuma qarradu*, *šar māt ál Hatti* (that *māt* before a place-name was actually read, as construct, and not as mere determinative, though long maintained by Haupt, was not proved until Lidzbarski's publication of an Aramaic letter from about 660 B.C., where *Akkad* is written *Mtkd*). Naturally *dannu* is a substantive, like German *der Mächtige*. My rendering of *dannu* was arrived at independently by Dhorme and Boissier, whom Ungnad endorses without hesitation. It must be remembered that usage differs with different periods of a language, and that the omen texts are copies of a very ancient original, as sufficiently proved by the many variations in the different recensions. Unless I am greatly mistaken, Sayce was one of the first to recognize the high antiquity and significance of the omens of Sargon and Narām-Šin. It may be added that "common sense" is a relative matter.

BIBLIOGRAPHY: GRAECO-ROMAN EGYPT

A. PAPYRI (1919-1920)

By H. IDRIS BELL, M.A.

THE present bibliography covers far less ground, and is consequently shorter, than its predecessor; but I have not confined my references to the limits indicated by the heading, since it has been necessary to include several which were omitted in previous articles. The bibliography is not so complete as I could wish, the British Museum's files of foreign periodicals, in particular Italian and French, being still incomplete and, in many cases, by no means up to date. I have, as before, to thank Dr GARDINER, Mr NORMAN H. BAYNES and Mr TOD for references and the loan of books.

1. LITERARY TEXTS.

The new publications of literary texts are this time few and unimportant, the annual Oxyrhynchus volume, usually the richest storehouse of such texts, having, in 1919, been devoted entirely to "documents." The chief publication of literary papyri, in respect at least of quantity, is the new volume of PSI (*Papiri greci e latini*, VI; Società Italiana per la ricerca dei Papiri greci e latini in Egitto, Firenze, 1920, pp. xix+221, 1 plate, L. 100). This volume consists, like IV and V, mainly of non-literary documents, and is therefore noticed below in § 2; but it also includes a few literary texts, numbered 720-728. They are none of them specially noteworthy; the known works are Aristophanes, *Pax*, 721-827, a MS. of the third century or even earlier, and Demosthenes, 51, 7-10, also of the third century. The other texts are new or unidentified: an epic fragment relating to Achilles and the ransoming of Hector, some very imperfect iambic trimeters, apparently from a comedy, scholia on an unknown poetical text, two fragments of romances, an astrological fragment, and some fragments of a book of palmomancy, a *genre* very popular in Egypt, to judge by the specimens now known. To these may be added no. 718, containing medical recipes.

Another fragment containing (according to the editor) scholia on an unknown text, perhaps referring to the contest for the arms of Achilles, is published by M. Norsa in the new Italian periodical *Aegyptus* (see below, § 4). This fragment, also belonging to the Società Italiana, contains two columns, both a good deal damaged, and is dated by the editor in the fifth or sixth century. Her opinion that the text consists of scholia is not beyond dispute; what can be understood of it suggests rather a prose narrative or paraphrase; or perhaps, in view of the difficulty of finding any connexion between certain of the clauses, a series of extracts. *Scolia a testi non noti*, in *Aegyptus*, I (1920), 154-8.

More interesting than any of the preceding is a fragment of a romance published by SCHUBART, from a papyrus of the second century in the Berlin Museum. Though in the form of a romance, the text partakes rather of the nature of an aretology, being evidently intended to exalt the power of Apollo, as manifested against certain enemies (perhaps, ROBERT suggests, the Phlegyae) who had impiously attacked Delphi. It is of a distinctly interesting character, and is written in a very poetical style. *Aus einer Apollon-Aretologie*, in *Hermes*, LV (1920), 188-195.

The only other newly published literary text I have to notice is a fragment of a first-century papyrus of Lycophron's *Alexandra*. The work is not of such importance that a new and early MS. of it need receive a very enthusiastic welcome, but the papyrus is interesting as the first yet discovered which contains part of it. A. HARTMANN, *Ein Münchener Lykophron-Papyrus*, in *Philologus*, LXXVI (1920), 68-91.

Coming now to previously published texts, I may mention first two articles of a general character. The first is a very important article by GRENFELL on the value of papyri for purposes of textual criticism. He discusses in turn the various authors represented in papyri so far discovered, giving very full bibliographical references, and at the end sums up the general results obtained. The inferior MSS. regularly agree, he points out, in many points with the papyri, thus showing the antiquity of their readings. The inference is that the eclectic method must be followed by textual critics; it will not do to rule out any MS. (unless it is demonstrably a copy of another extant MS.) as too late or inferior to be deserving of attention.

The general result is "to some extent reassuring, though less so than it was in 1904 when Sir F. G. Kenyon wrote." *The Value of Papyri for the Textual Criticism of Extant Greek Authors*, in *Journ. Hell. Stud.*, XXXIX (1919), 16-36.

KENYON has published in the *Journ. Hell. Stud.* (XXXIX, 1-15) an interesting paper, originally written for the Leeds Branch of the Classical Association and separately published by the Cambridge University Press (1918), on the services rendered by papyrology to the study of classical literature. *Greek Papyri and their Contribution to Classical Literature*; with a brief bibliography.

I have only one papyrological reference to Homer, a review, by P. CAUER, of Gerhard's *Ptolemäische Homerfragmente*; *Woch. f. Klass. Phil.*, XXXVII (1920), 97-101; but mention may be made of T. W. ALLEN's *The Homeric Catalogue of Ships* (Oxford, Clarendon Press, 1921. Pp. xi+191. 2 maps. 8"), as the MSS. collated include the hitherto unpublished and unused P. Lond. Inv. No. 1873 (=p¹⁰⁴) and other papyri.

A. LUDWICH has devoted an article of some importance to the paraphrase of a poem on the rape of Persephone published in the *Berl. Klassikertexte* (v, 7 ff.). He attempts a restoration of the text, with explanatory notes, and appends to this a discussion of the work, particularly in its relation to the Homeric hymn to Demeter. *Paraphrase eines Gedichtes über den Raub der Persephone*, in *Berl. Phil. Woch.*, XXXIX (1919), 999-1008, 1028-32.

P. COLLART, studying PSL II, 149 verso, concludes, on the grounds of vocabulary and metrics, that the poem is by a writer of the school of Nonnus, "et même d'un imitateur très zélé du poète"; and he adds: "Ou bien l'auteur du poème est contemporain de Nonnos, son modèle, et du scribe copiste du fragment—coïncidence remarquable, singulière—, ou bien le papyrus est postérieur à la date qu'on lui a assignée." The force of the coincidence, if it is taken as an argument against the editors' date, is perhaps diminished by the fact, not mentioned by Collart, that the iambs on the recto are by the same hand as the verso, which may suggest that the papyrus is in the poet's autograph, being used by him for drafts or fair copies of various works. *Deux Papyrus des Pubblicazioni della Società Italiana*, 1, in *Rev. de Phil.*, XLIII (1919), 36-8.

The Theocritus fragments in *P. Oxy.* XIII, 1618, are studied by F. GARIN from the point of view of their bearing on the text. *Teocrito nel papiro di Osmirino 1618*, in *Riv. di Fil.*, XLVII (1919), 434-8.

Coming now to the lyric poets, I may note a review by J. SITZLER of the third edition of Diehl's *Supplementum Lyricum*. *Woch. für Kl. Phil.*, XXXVI (1919), 337-44.

J. M. EDMONDS has published an article on the latest fragments of Sappho and Alcaeus (*P. Oxy.* 1231, 1232, 1233, 1234, 1360), supplementing, and in some cases correcting, a previous article in the *Class. Rev.* in May, 1914. He also proposes a new restoration for the beginning of the Berlin Ode on the friend at Sardis, substituting Anactoria for Mnasicida. *The New Lyric Fragments—III*, in *Class. Rev.*, XXXIII (1919), 125-30. In a further article he publishes notes on readings in the Nereid Ode (*P. Oxy.* 1, 10). *Sappho's Nereid-Ode Again*, in *Class. Rev.*, XXXIV (1920), 4-6. In a note supplementary to this (*Sappho's Nereid-Ode*, in *Class. Rev.*, XXXIV, 63) BELL, while accepting some of Edmonds's readings, questions others. I take this opportunity of correcting a statement there made. I state of l. 9 that "ξ' ελα seems likely to be right. There is a trace of ink which I consider quite inconsistent with θ." Mr LOBEL has pointed out that a fibre was twisted, which altered the appearance of the letter, and on having this straightened I find that the character suits θ. Thus ξ' ελα is to be rejected. E. L[OBEL] points out that the third century papyrus *P. Oxy.* 424 has parts of five lines in common with the seventh-century vellum scrap in *Berl. Klassikertexte*, v (2), 9 ff. *From Sappho, Book I*, in *Bodl. Quart. Record*, III (1920), 97.

Corinna is the subject of an article by E. HERMANN, who studies the fragments for their evidence as to the Boeotian methods of accentuation. *Die böotische Betonung*, in *Gött. Gel. Nachr.*, 1918, 273-80.

The new Pindar fragments in *P. Oxy.* XIII have, as might have been expected, attracted a good deal of attention. Besides reviews of the volume, noticed below, two articles are devoted to this papyrus individually, the first by N. TERZAGHI (*Per la storia del ditirambo*, in *Atti d. R. Acc. d. Sc. di Torino*, LV, 1919-20, 457-64), the second by O. S[CHROEDER] (*Aus dem neunten Oxyrhynchusband*, in *Sokrates*, VII, 1919, 141-2), who confines himself to reproducing the text with some suggestions for readings and one or two notes.

O. HÖFER has published a note on l. 129 of the fifth Ode of Bacchylides, in which he points out that the Aphares there mentioned is referred to in a passage of Lactantius, the source of which he thinks is Bacchylides. *Zu Bacchylides* (v, 129), in *Berl. Phil. Woch.*, XXXIX (1919), 42-3. In l. 142 of the same Ode E. J. BROOKS explains ἀγλαύρα as "having unlocked" (*Class. Rev.*, XXXIV, 1920, 101); and the latest fragments of the poet (*P. Oxy.* XI, 1361) are the subject of notes on textual matters by P. MAAS (*Zu den neuen Bruchstücken des Bacchylides*, in *Sokrates*, VII, 1919, *Jahresberichte*, 37-41).

F. AGENO deals at considerable length, in two articles, with the *Persae* of Timotheus. His remarks are for the most part concerned with questions of reading or of interpretation only as affecting these questions. *Note a Timoteo*, in *Studi d. Sc. Pap.*, III, 86-110, and *Nuove note a Timoteo*, in *Aegyptus*, I (1920), 269-96.

The song 'Ποδὶν ἀρέμους' (*P. Oxy.* XI, 1383) is, along with two other texts mentioned below, the subject of some remarks by L. DEUBNER, who discusses the text, makes suggestions for readings, and adds some notes on the metre. *Bemerkungen zu einigen literarischen Papyri aus Oxyrhynchos* (*Stzgeber. Heidelb. Akad.*, 1919, 17. Abh., pp. 13, 8^v). This publication is reviewed by PREISENDANZ (*Berl. Phil. Woch.*, XI, 1920, 1129-32).

W. WEINBERGER devotes a somewhat lengthy article to the *Hecale* of Callimachus. He deals with the fragments as a whole, not only the papyrus fragments, with special reference to L. Kapp's monograph noticed in *Journal*, VI, 124. *Zur Hekale des Kallimachos*, in *Philologus*, LXXVI (1920), 68-91. In a short note S. EITREM, *à propos* of a passage in the Cydippe fragment (*P. Oxy.* 1011, 12 ff.), discusses the religious significance, and especially the importance for healing, of goats and wolves. *Lykos and Chimaireus*, in *Class. Rev.*, XXXIV (1920), 87-9.

A re-edition, with commentary, by M. LENCHANTIN DE GUBERNATIS, of the extract from an epithalamium published as *P. RyI.* I, 17, is inaccessible to me. *Epithalamii fragm.* Pinerolii, 1919. (See *Aegyptus*, I, 124, no. 167.)

A bulky volume on the lyrical poems of Horace, by G. PASQUALI, appears, from a review of it by A. C[ALDERINI] (*Aegyptus*, I, 246-7), to contain much discussion of the Greek lyric fragments discovered in Egypt. *Orazio Lirico, studi.* 8^o, pp. viii+792. Firenze, 1920, L. 25.

Coming now to the drama, I may notice first the literature relating to the *Ichneutae* of Sophocles. E. BETHE devotes to the play a short monograph (*Die Ichneutai des Sophokles*, pp. 29, Teubner, 1919, 1 M.) in the *Berichte über d. Verh. der Sächs. Ak. d. Wiss.* (LXXI, 1919, 1. Heft), in which, after studying various problems raised by it, he concludes that it is not, as Wilamowitz thought, a work of the poet's youth but "ein Werk aus Sophokles' späterer Zeit, etwa den zwanziger Jahren" [of the fifth century]. HUNT, in the *Class. Rev.* (XXXIV, 1920, 104-6), reviews, rather severely, Walker's edition (*Journal*, VI, 124) of the play, correcting his misstatements as to alterations, etc., in the papyrus. This edition is also reviewed, rather more leniently, by E. A. SONNENSCHN in the same periodical (106-7), and very severely by W. J. M. S[TARKIE] (*Hermathena*, XLII, 1920, 157-9)¹.

Schroeder's *Novae com. fragm.* (*Kl. Texte*, 135) is reviewed (in German) by S. EITREM (*Nord. Tidsskr. f. Fil.*, VI, 1917, 87-8).

The fragments of the *Demes* of Eupolis, found with the Cairo Menander codex, are studied, along with other comic fragments, by A. KÖRTE, in a monograph forming the sixth *Heft* of the *Ber. über d. Verh. der Sächs. Ak. d. Wiss.*, LXXI, 1919 (Teubner, 1919, pp. 40, 8^o, 1 M. 30 Pf.). He upholds, against Jensen, the hypothesis that the third leaf also belongs to the *Demes*. He deals also with the *Misumenos* fragments (Wilamowitz, *Stzgeber. K. Pr. Ak.*, 1918—see *Journal*, VI, 120—and *P. Oxy.* XIII, 1605) and with the fragment (no. 5) published by Wilamowitz along with the *Misumenos* fragment and conjecturally assigned to Alexis. *Zu neueren Komödienfunden*. This volume is reviewed by J. L. HEIBERG (*Nord. Tidsskr. f. Fil.*, IX, 1920, 67-8) and by E. WUST (*Berl. Phil. Woch.*, XI, 1920, 385-9).

The *Demes* is also the subject of a note by E. BIGNONE, who points out that one line is an imitation of the first line of Euripides' *Oeneus*. *I Demi di Eupoli e l'Eneo di Euripide*, in *Boll. di Fil. Class.*, XXIV (1917-8), 168-9.

I have but one special reference to Menander, a German translation by O. HEY of the *Perikeiromene* (*Menanders Perikeiromene: Einzelabdruck aus d. Blättern f. d. Gymn.-Schulwesen hrsg. vom Bayer. Gymn.-Lehrer-Verein*, LIII, 1917, 6. Heft, 188-203, 8^o, München), which I know only from a review by F. POLAND (*Berl. Phil. Woch.*, XI, 1920, 6-8). An edition (if I rightly understand the reference in *Aegyptus*) of some or all of Herondas by BÜCHNER is also inaccessible to me. *Herondas*, in *Anthol. aus d. gr. Lyrikern*, Pp. iii+19. Gotha, Perthes, 1920. (See *Aegyptus*, I, 257, no. 428.)

Coming now to prose literature, and first, as last year, to the historians, I may note an extremely valuable bibliography of Thucydides by S. P. WIDMANN in *Bursians Jahresber.* (CLXXVIII, 1919), one section of which (II. *Überlieferung*, pp. 228-37) deals with the papyrus fragments, all the more notable readings in which are recorded. This bibliography covers the years 1908-18.

An important work on the *Athenaion Politeia* has been published by G. MATHIEU—or rather was

¹ Dr Starkie is wrong in supposing (p. 158) that the Menander codex was found in the Fayyum.

written by him and has been published since his death. It is in fact unfinished ("Tébauche déjà fort travaillée d'un livre interrompu par la mort"). *Aristote, Constitution d'Athènes: Essai sur la méthode suivie par Aristote dans la discussion des textes*. Pp. vii + 137. Paris, 1915. 216 fasc. of the *Bibl. de l'Éc. d. Hautes Études*.

The *Hellenica Oxyrhynchia* and the fragments which have been used in the controversy as to its authorship continue to be discussed. I referred last year (*Journal*, vi, 126) to an article by J. H. LARSSEN on the new Ephorus fragments, upholding his view that the *Hell. Oxy.* is the work of Cratippus. It was then inaccessible to me but I have since seen it and now add a fuller reference (*Berl. Phil. Woch.*, xxxix, 1919, 958-60). With the dogmatism seen elsewhere in his discussions of this problem he rejects the arguments for Ephorus's authorship drawn from the new fragments and maintains that the agreements between the *Hell. Oxy.* and Ephorus are due to the fact that the latter used Cratippus. His edition of the *Hell. Oxy.* (*Kl. Texte*, 138) is reviewed (in Danish) by H. RØEDER (*Nord. Tidsskr. f. Fil.*, vi, 1917, 96). M. C. MONDINI devotes to the new Ephorus fragments an article which I have been unable to see (*Nuovi frammenti di Eforo recentemente scoperti*, in *Nuova Rivista Storica*, III, 1919; see *Aegyptus*, I, 123, no. 146); and M. LENCHASTIN DE GUBERNATIS, discussing the fragment of a history of Sicily (*P. Oxy.* xi, 1365), maintains, against Grenfell and Hunt (*P. Oxy.* xiii, p. 109, his objections to Ephorus as the author. He rejects also Theopompus and Aristotle, and suggests, merely as a conjecture, Menaechnus, author of a *Σικυωνικά*, and a writer of the age of Alexander the Great. He also defends some of his readings against Costanzi (see *Journal*, vi, 126). *I nuovi frammenti di Eforo e lo storico di Sicione*, in *Boll. di Fil. Class.*, xxv, 127-30. Lastly, P. CLOCHÉ, in an article on Theban policy, makes use of the *Hell. Oxy.* among other sources. *La Politique thébaine de 404 à 396 av. J.-C.*, in *Rev. Ét. gr.*, xxxi (1918), 315-43.

P. COLLART, in an article already referred to, deals with PSL 156, a fragment not identified at first but recognized by Crusius as the beginning of a life of Aesop. He compares it with the two existing versions, shows it to be fuller than either, and on their basis attempts a restoration. *Deux Papyrus*, etc., in *Rev. de Phil.*, xliii (1919), 38-46.

Among orators, the first place is taken by Lysias, the new fragments of whom (*P. Oxy.* xiii, 1606) are discussed by R. MILANI, *Nuovi frammenti di oratori greci*, in *Rassegna Nazionale*, 2 S., xxi (1919), 288-93. Jensen's *Hyperidis orationes sex* (*Journal*, vi, 127) is reviewed, in Danish, by W. NORVIG (*Nord. Tidsskr. f. Fil.*, vii, 1918, 107-8). A Latin translation by C. LANDI and an Italian one by L. LEVI of the funeral oration are alike inaccessible to me (*Hyperidis oratio funebris latine conversa*, Patavii, 1919; *Il discorso di Iperide in onore dei caduti della guerra Lamiaca*, 2 ed., Firenze, 1919; see *Aegyptus*, I, 124, nos. 162, 163). The anonymous oration on the cult of Caesar in *P. Oxy.* xiii, 1612 is discussed by L. DEUBNER in a treatise already referred to (*Bemerkungen zu einigen literarischen Papyri aus Oxyrhynchus*, in *Stzgsber. Heid. Ak.*, 1919, 17. Abb.), and by T. GRASSI in an article inaccessible to me (*Culti imperiali*, in *Fanfulla d. Domen.*, 23 March, 1919; see *Aegyptus*, I, 129, no. 259).

In the sphere of philosophy, the fragments of Antiphon Sophistes (*P. Oxy.* xi, 1364) continue to be much discussed. An article by C. THEANDER is of some importance, making suggestions for new readings. *De fragmentis Antiphontis sophistae nouis*, in *Nord. Tidsskr. f. Fil.*, ix (1920), 1-7. H. SCHÖNE also devotes a note to this text, suggesting, in l. 7, [δ' ἦ]ν ρὰ in place of the editors' [πὰ]ντα. *Verschiedenes*, § II, in *Rhein. Museum*, N.F., LXXIII (1920), 139-40. Articles by DIEHL (*Internat. Monatsschrift*, xi, 82 ff.) and VON ARNIM (*Frankfurter Universitätsrede*, v, 1916, *Gerecht u. Nutzen in der griech. Aufklärungsphilosophie*, 5 ff.) are inaccessible to me. From a reference by WENGER (*Krit. Vierteljahrsschr. f. Gesetz. u. Rechtsw.*, LIV, 1918, 40) it appears that both scholars translate the text and comment on it.

In a note on Pap. Berol. 9766 (*Berl. Klassikertexte*, II, 54), an extract from Plato's *Laws*, H. SCHÖNE thinks the word *βούλευσι* there (l. 18) requires emendation, e.g. to *ἀρχεται*. *Verschiedenes*, § VII, in *Rhein. Museum*, N.F., LXXIII (1920), 147.

The bibliography in *Aegyptus* (I, 122, no. 133) refers to an article by A. ROSCIO in *Riv. d'It.*, 1919, 502, on *Nuovi dialoghi socratici (L'Alcibiade di Eschine)*, i.e. *P. Oxy.* xiii, 1608, but there appears to be some error in this reference, as I have failed to find the article mentioned.

The Herculaneum papyri, though not from Egypt, are usually taken as falling to some extent within the sphere of papyrology, and reference may therefore be made to an article by E. BIGNONE, with improved readings of portions previously read and decipherments of unpublished portions of Pap. Herc. 57 and 168 (*Philodemea*, in *Riv. di Fil.*, XLVII, 1919, 414-22); and to one by R. PHILIPPSON on Philodemus's *Περὶ Εὐσεβίας*, of which two instalments have so far appeared (*Zu Philodems Schrift über die Frömmigkeit*, in *Hermes*, LV, 225-78, 364-72).

The fragment in *P. Oxy.* x, 1250, of the *Clitophon and Leucippe* of Achilles Tatius is dealt with by F. GABIN from the point of view of the text. Discussing the differences between the traditional text and that of the papyrus, he rejects the idea of two recensions, and inclines to prefer the view that a leaf of the archetype of our MSS. containing capp. 2 and 3 was out of place. *Le Avventure di Leucippe e Clitofonte nel Paparo di Oxyrhynchos 1250*, in *Riv. di Fil.*, LXXVII (1919), 351-7.

The musical papyrus at Berlin published by Schubart (*Journal*, vi, 121) is the subject of articles by TH. REINACH (*Nouveaux fragments de musique grecque*, in *Rev. Arch.*, s. V, x, 1919, 11-27; not seen by me; see *Aegyptus*, I, 258, no. 460); by A. THIERFELDER (*Ein neu aufgefundener Papyrus mit griechischen Noten*, in *Zeitschr. f. Musikwissenschaft*, I, 1919, 4; not seen by me; *Aegyptus*, vi, 258, no. 459); by H. ABERT (same publication, pp. 313-24; not seen by me); and by O. SCHROEDER (*Berl. Phil. Woch.*, xi, 1920, 350-3), who reviews with it, very severely, Thierfelder's re-edition of the papyrus (*Päan*; see *Journal*, vi, 121²).

The papyrus of the *Epitoma* of Heraclides Lembus (*P. Oxy.* xi, 1367) is the subject of an article by M. C. MONDINI, who comments on various points in the text, and in particular makes the interesting and not improbable suggestion that the person referred to in ll. 1-19 was a Mantinean statesman of the time of Ptolemy II and Antigonus Gonatas. *Intorno al P. Oxy. 1367*, in *Studi d. Sc. Pap.*, III, 111-6.

Notes on the "Work on Literary Criticism" in *P. Oxy.* XIII, 1611 are published by P. MAAS (*Akusilaos über Kaineus*, in *Sokrates*, VII, 1919, 191-3) and L. DEUBNER (in his *Bemerk. zu ein. lit. Pap. aus Oxyrhynchos*, Heidelberg, 1919, already referred to).

There is not very much to chronicle under the head of magic. In the newly-founded *Byz.-Neugr. Jahrb.* (I, 1920, 157) the editor, N. A. BRES, in a note on an ostrakon published in Deissmann's *Licht vom Osten* (2-3 ed.), suggests that ὅτι κρόνον πᾶλ(ε)ν should be interpreted as ὅτι κρόνον πᾶλ(ε)ν. *Zum Ostrakon aus Eschmunen mit einem Bindezauber*. K. PREISENDANZ, in *Philologus* (LXXV, 1919, 482-4), explains a difficult passage in *P. Lond.* I, 46, 70-95, by supposing that the scribe put the figure in the wrong place and otherwise misunderstood his model (XON in *Pap. Lond.* XLVI); and in *Berl. Phil. Woch.* (XXXVIII, 1918, 719-20, *Zum Pariser Zauberpapyrus Z. 2225*) explains εἰς in a passage of the Paris magical papyrus as = εἰς, adding some other notes.

Under the heading of Christian literature also there is not very much to be noted that is strictly papyrological. S. G. MERCATI has some miscellaneous notes in a periodical not accessible to me (*Note papirologiche*, in *Biblica*, I, 1920, 270-1, 371-5; see *Aegyptus*, I, 401, no. 687, where the subjects are briefly noted). E. JACQUIER, in an article on *Les Sentences du Seigneur Extracanoniques (Les Agrapha)*, deals, in § IV, "Les Papyrus," with the two sets of Logoi and the Oxyrhynchus fragments of uncanonical Gospels. *Revue Biblique*, N.S., XV (1918), 93-135. TH. SOIRON, in an article not accessible to me (*Die Logia Jesu*, in *Neutestam. Abhandl.*, hg. von M. MEINERTZ, VI, 4, Münster, 1916, M. 4. 60; see *Aegyptus*, I, 256, no. 420), also discusses the Logoi. Reference must also be made to Evelyn White's elaborate edition of these sayings, which I know only by reviews (e.g., *Times Lit. Suppl.*, Oct. 21, 1920). *The Sayings of Jesus from Oxyrhynchus*. Edited, with Introduction, Critical Apparatus, and Commentary, by HUGH G. EVELYN WHITE. 8 x 5 in. Pp. viii + lxxvi + 48. Cambr. Univ. Press, 12s. 6d. n.

I ought also to refer to Charles's very elaborate edition of the Apocalypse, the appendix to vol. II of which contains the text of four papyrus (or vellum) fragments. R. H. CHARLES, *A Critical and Exegetical Commentary on the Revelation of St John*, 2 vols. Pp. xcii + 373 and viii + 497. 8°. Edinburgh, T. and T. Clark, 1920. The work is reviewed in the *Times Lit. Suppl.*, Oct. 7, 1920, 644.

I noticed last year the appearance of Part I of vol. II of Moulton's *Grammar of New Testament Greek*. Part II has now appeared, though not in time for me to see it before this article goes to press (Part II. *Accidence*. Ed. by W. F. HOWARD. Pp. 156. Edinburgh, T. and T. Clark. 10s. net. See *Athenaeum*, London, Jan. 21, 1921, p. 82). There has also appeared an important grammar by A. T. ROBERTSON: *A Grammar of the Greek New Testament in the Light of Historical Research*, 3rd ed., 1919. Hodder and Stoughton. Pp. lxxxvi + 1454. 42s. net. It is reviewed in *Times Lit. Suppl.*, March 11, 1920, 166, and in *Journ. Hell. Stud.*, xl, 1920, 210 f., and is noticed, along with other recent work on N.T. grammar, by G. MILLIGAN (*The Grammar of the Greek New Testament*, in *Expository Times*, XXXI, 1920, 420-4). A new part (IV, *ἰάπωνος λέων*) of MOULTON and MILLIGAN's *Vocabulary of the Greek Testament* (Hodder and Stoughton, 10s. 6d. net) has also appeared, but I have not yet been able to see it.

The editions of the Freer MSS. (*Journal*, vi, 122) are reviewed by H. LEBÈQUE (*Rev. d. Ét. gr.*, XXXI, 1918, 134-6). *P. Oxy.* XIII, which consisted entirely of literary or theological texts, has been reviewed by W. H. D. ROUSE (*Class. Rev.*, XXXIV, 1920, 67-8); C. O. ZURETTI (*Riv. di Fil.*, XLVII, 1919, 445-62);

M. CROISSET (*Journ. d. Sav.*, 1919, May-June; not accessible to me); W. N. BATES (*Am. Journ. of Phil.*, XL, 1919, 431-4); an anonymous reviewer (*Journ. Hell. Stud.*, XI, 1920, 211 f.); and P. COLLART (*Rev. Égypt.*, I, 1919, 276-8). Collart also devotes to it an article in the *Rev. de Phil.* (XLIII, 1919, 47-62; *Les Papyrus d'Oxyrhynchos à propos du tome XIII*), in which, besides making a number of suggestions for readings or restorations, he gives a brief survey of the theological and literary texts from Oxyrhynchus published by Grenfell and Hunt. An article by A. THIBAUDET, apparently concerned with this volume, is inaccessible to me (*Les vieux Papyrus*, in *Rev. Crit. des Idées et des Livres*, XXVII, 1920, 129-38; see *Aegyptus*, I, 254, no. 375).

2. NEW PUBLICATIONS OF NON-LITERARY TEXTS.

As already stated, the 1920 volume of the Egypt Exploration Society (*Oxyrhynchus Papyri*, Part XIV, edited by B. P. GRENFELL and A. S. HUNT, pp. xiv + 244, 3 plates, 42s.) consisted entirely of non-literary texts. No single text was of quite the same interest and importance as certain of the more noteworthy ones contained in previous parts, but the volume is nevertheless of very considerable value. It consists chiefly of legal contracts and letters, though there are also some accounts and registers. Among the first class may be mentioned 1627, which "throws an interesting light on the method of appointment to public duties"; a number of late Ptolemaic (1st cent. B.C.) contracts, valuable for palaeographical purposes; 1631, an extremely important contract for labour in a vineyard, noteworthy for its wealth of detail as to agricultural processes (to which 1692 is to be added); 1632, a lease of a palm-grove, interesting in itself but valuable primarily for the light it throws on the "Eras of Oxyrhynchus" and other chronological reckonings, on which the editors have a long and important note; 1634, an interesting sale of mortgaged property; 1637 and 1638, two divisions of property; 1639, of some importance for the evidence it affords for the nature of a whole class of documents, often explained as instances of *datio in solutum*; 1642, an appointment of a legal representative, with very interesting instructions; and a large number of contracts printed at the end, with little commentary, as "Minor Documents," but, many of them, of considerable value for their evidence as to the legal formulae in various classes of deeds at Oxyrhynchus.

The private letters are a special feature of this volume. Though they do not include any letter quite equal to the best of those previously published, they contain many incidental points of interest, and two of them, 1666, a letter concerning the transfer of a recruit from the infantry to the cavalry, and 1676, described by the editors as "the most sentimental that has yet appeared among published papyri," are very noteworthy.

This volume has been reviewed by R[OUSE] (*Class. Rev.*, XXXIV, 1920, 179), C[ALDERINI] (*Aegyptus*, I, 1920, 250-2), B[ELL] (*Athenaeum*, 1920, Aug. 20, 236-7), and C[RÖNERT] (*Lit. Zentralbl.*, 1920, 838).

Another important volume is PSI. VI¹, already referred to at the beginning of § 1. It continues the invaluable series of papyri, chiefly letters, from the archive of Zeno. Most of those included in this volume are fragmentary and therefore inferior in interest to their predecessors; but the archive has been so much dispersed that not a few of these fragments may prove to fit fragments in other collections; and indeed this has already been found to be the case with some of them, which complete fragments at Cairo. The Zeno papyri do not, however, by any means exhaust the interest of the volume. There are many miscellaneous documents, Roman and Byzantine; and particular mention must be made of two Latin papyri, 729, a sale of a horse, dated in A.D. 77, and 730, a marriage contract. Both are imperfect but nevertheless are, by their very nature, of the greatest interest and will doubtless attract much attention.

Another volume received after the writing of this bibliography had already been commenced is vol. II of PREISIGKE'S Catalogue of the Strassburg papyri. It is a slender volume, for it had been designed as merely the first part of vol. II; but the occupation of Strassburg by the French and the consequent removal of Preisigke to Heidelberg prevented the completion of the work and made it necessary to issue Heft I as the final volume, with its own indices. It is greatly to be hoped that arrangements will be made for the publication of the remaining papyri in the Strassburg collection.

The papyri published in this volume are nearly all of them of the Ptolemaic period, though a few Roman documents and one Byzantine receipt are included. A compact group of Ptolemaic documents consists of papyri from the archive of the family of Panobchunis, of which many documents exist in the British Museum and elsewhere. Most of these are well preserved, but they do not add much of value to our knowledge of the formulae and legal processes in use at Diospolis in the late second and early first

¹ This appeared too late for me to give it more than a cursory examination before writing this bibliography.

centuries B.C. They do however give us further information about the family concerned, and enable Preisigke to draw up a more complete genealogy than was previously possible. Besides these papyri there are several of the third century A.C., one of which, 92, the lease by a *αραβουῶν* of his *οἶκημα*, is of very considerable interest from several points of view. *Griechische Papyrus der Universitäts- und Landesbibliothek zu Strassburg*. Herausgegeben und erläutert von Prof. Dr. FR. PREISIGKE. Band II, Urkunden Nr. 81-125. Mit 26 Schriftproben im Text. Leipzig, 1920, J. C. Hinrichs. Pp. iv+88.

Another small volume of papyrus texts, received in time for this reference to be inserted in proof, is edited by H. LEWALD, and introduces us to a new papyrus collection, that of the Juristic Seminar of Frankfurt University. The collection is not large, and the present volume contains only seven documents, all from cartonnage of the third century B.C.; but several of them are of considerable interest; and one, no. 7, which refers to the Syrian campaign of Philopator, is of historical importance. Help in the edition has been given to the editor by Wilcken and Schubart, and he and they are to be congratulated on the appearance of a noteworthy volume. *Griechische Papyri aus dem Besitz des Rechtswissenschaftlichen Seminars der Universität Frankfurt*. Von H. LEWALD. (*Stgaber. d. Heid. Ak. d. Wiss.*, 1920, 14. Abh.) Heidelberg, 1920, Carl Winter. Pp. 53. 2 Plates.

Schubart's edition of the so-called Gnomon papyrus appeared too late for me to do more than refer to it in a footnote to my last year's bibliography (*Journal*, VI, 137^b); and something must therefore be said of it here (*Der Gnomon des Idios Logos*; von E. SECKEL und W. SCHUBART, Iter Teil: *Der Text*, von W. SCHUBART, Weidmann, Berlin, 1919, pp. 44, 1 plate). It forms part of the series of Berlin *Griechische Urkunden* (BGU.), which is henceforth to be issued on different lines, no longer lithographed and with the minimum of commentary and apparatus, but printed, with commentaries, rather on the model of the E.E.S. publications. The difficulties of the present time made it necessary to issue the Gnomon papyrus (which makes up Heft 1 of Vol. V of the BGU., itself bearing the serial number 1210) without the elaborate commentary projected for it. In this slim volume we are given only the text and translation, with critical apparatus and a few very short notes of an explanatory kind, and index. It goes without saying that the editorial work is of excellent quality. The papyrus is of very great importance, and it is perhaps a little ungrateful to confess oneself slightly disappointed; but certainly this "Gnomon" of the Idios Logos is more scrappy, less systematically arranged, and often much more ambiguous in its evidence than might have been expected. It raises almost more problems than it solves; but it is none the less a valuable addition to our knowledge (giving as it does the actual rules and something of the theory of one branch of Roman administration), and it will keep scholars, especially jurists, busily employed for a long time to come. Already it has received a good deal of attention. P. M. MEYER, in his volume *Juristische Papyri* (see below, § 3), reprints the text with translation and a brief commentary. SCHUBART himself, besides publishing separately a complete translation with an explanatory introduction, brief commentary, and a specimen facsimile (*Der Gnomon des Idios Logos*, in *Ber. aus d. Preussischen Kunstsammlungen*, XLI, 1919-20, 72-90), has collected in a separate article the sections relating to Egyptians or Egyptian cults and usages, accompanying them with translations and commentary (*Rom und die Ägypter nach dem Gnomon des Idios Logos*, in *Zeitschr. f. äg. Spr.* LVI, 1920, 80-95); and O. LENEL and J. PARTSCH have devoted to the papyrus a short monograph, in which they select a number of the paragraphs, translating them into Latin and adding a brief commentary (*Zum sog. Gnomon des Idios Logos*, in *Stgaber. d. Heid. Akad.*, 1920, 1. Abh., Heidelberg, 1920, pp. 32; reviewed by P. DE FRANCISCI, in *Aegyptus*, I, 1920, 387-9). They hold that only part of the Gnomon was originally in Latin, some sections having been in Greek from the first. Schubart's original publication is also reviewed by WILCKEN (*Arch. f. Pap.*, VI, 416-17); and M. MAAS has published a note on it which I have not seen (*Actuelles von 150 n. Chr.—Ein Papyrus gegen Steuerflucht*, in *Neue Zürcher Zeit.*, 5 March, 1920; see *Aegyptus*, I, 253, no. 368).

C. C. EDGAR continues his preliminary publication, by instalments, of the Cairo Zeno papyri (see *Journal*, VI, 132). Each instalment offers something of quite exceptional interest and value; the Zeno archive is indeed one of the richest and most important ever discovered. In Part III (*Annales du Service*, XIX, 13-36, nos. 22-36) we have, among others, a receipt for the cost of excavating 50 *aoilia* of earth (23), an interesting letter concerning the delivery of wheat at Alexandria (26), another on a double sowing of land (27), one (from the *dioecetes*) of some importance for the wine-trade and the rug-weaving industry (29), a list of contractors whose tenders had been accepted for a piece of work near Philadelphia, two important letters concerning the lease of a beer-shop (32 and 33), two relating to a *chrematistes* (34 and 35), and a loan with several points of interest (36, partially completed by a later acquisition and republished later at the beginning of Part V). Part IV (*Annales*, XIX, 81-104, nos. 37-48) includes, *inter alia*, a petition

concerning a vineyard, of value for the method of tax assessment (38), a letter from the *dioecetes* on the fittings of some galleys, perhaps for the wedding journey of the Princess Berenice (39), a letter from a court official certainly referring to this journey and of the greatest interest (42), a declaration on oath, too imperfect to be of great value in itself but interesting because it names as the eponymous priestess in year 35 Bilistiche, very likely (though Edgar doubts this) the celebrated mistress of Ptolemy Philadelphus (46), and two alternative epitaphs on a favourite dog of Zeno's, which had lost its life in saving him from a wild boar in the Arsinoite nome (48). This last papyrus is of quite exceptional interest. It is almost certainly the autograph MS. of some poet of the Alexandrian circle from whom Zeno had commissioned an epitaph; and though these epigrams are of no great literary value it is a rare privilege to be able to take a peep, as it were, into the workshop of a contemporary of Theocritus. Part V (*Annales*, xx, 19-40, nos. 49-54) offers several points of interest on agricultural and other matters in the neighbourhood of Philadelphia; but these local papyri are quite overshadowed by no. 54, which takes us away from the peasants and Greek settlers of Egypt to a city state of Asia Minor. It contains (a) a draft of a petition to the *dioecetes* from a citizen of Calynda, (b) a copy of a letter from Neon of Calynda to a friend in Egypt, (c) a draft of a letter from Zeno, probably to the *dioecetes*, backing Neon's request, (d) a memorandum, not connected with the preceding. The Calyndian documents are of the utmost importance, as they illustrate the relations between the Ptolemies and the city states and show us how very shadowy, in reality, was the independence of the latter.

The earlier parts of the Edgar papyri are reviewed, with his usual brilliance, by WILCKEN (*Archiv f. Pap.*, vi, 1920, 447-54); and they are utilized by L. H. VINCENT in an important article (using, besides them, archaeological material) on Palestine in the third century B.C. *La Palestine dans les papyrus ptolémaïques de Gerza*, in *Revue Biblique*, N.S., xix (1920), 161-202.

H. I. BELL has published, from the London collection, four private letters of the Roman period, the first two of which, one a schoolboy's letter home, the other from a son to his mother enclosing a letter to his brother in which he reproves him for want of consideration for his mother, are of quite exceptional interest. *Some Private Letters of the Roman Period from the London Collection*, in *Rev. Égypt.*, i (1919), 199-209.

J. G. MILNE publishes some wooden tablets from Gebelên, which are of considerable interest, firstly because they are not, as usual with such tablets, mummy labels but receipts, equivalent in fact to ostraca, and secondly for their contents, as they indicate a new use of the word *πρόστιμον*, which seems in them to mean something like "valuation," "assessment." They relate to the family of Panobchunis (see above, p. 92). Some of them are in Greek, some in Demotic, the latter transcribed and translated by Sir H. THOMPSON, *Wooden Tablets from Egypt*, in *Bodl. Quart. Record*, II, 314-8.

J. KURTH publishes, from a collection of papyrus fragments, probably from near Hermopolis, sent him some twenty years ago, a rather interesting list of *σχιάρια* and *σχιάριαμοφόρια*, apparently of the seventh century, part of an inventory of church or monastic property. In l. 4 f. he finds a dual form; but this, at that period, seems wildly improbable. *Ein Stück Klosterinventar aus einem byzantinischen Papyrus*, in *Byzantinisch-Neugriechische Jahrbücher*, i, 1920, 142-7.

Two isolated papyri, published some time since but overlooked in my earlier bibliographies, may be referred to here. One is an interesting Latin papyrus, probably of 505 A.D., relating to a recruit, published by K. BRANDI. The papyrus is now in the Rylands Library, and is edited by Brandi from a photograph. *Ein lateinischer Papyrus aus dem Anfang des 6. Jahrhunderts*, in *Arch. f. Urkundenforschung*, v (1914), 269-88. Reviewed by WILCKEN in *Arch. f. Pap.*, vi, 444.

The other is a petition to a centurion, of the third year of Septimius Severus, published by E. DRERUP, *Ein neuer Papyrus*, in *Festschr. f. G. von Hertling* (Görresgesellschaft), 1913, 199-201. Reviewed by WILCKEN, *Arch. f. Pap.*, vi, 418.

3. VOLUMES ON PAPYROLOGICAL AND ALLIED QUESTIONS.

One of the "events" of the past year in the sphere of papyrology is the appearance of an invaluable collection of juristic texts by P. M. MEYER. A comparison is at once provoked with Mitteis's portion of his and Wilcken's *Grundzüge und Chrestomathie*. Meyer's volume is, however, planned on somewhat different lines, besides which, having appeared so much later, it incorporates the results of much subsequent discovery and research. It is a collection of texts valuable to the student of Graeco-Roman and Egyptian law, either for their typical character, as illustrating various classes of documents, or by reason of some remarkable feature in them, furnishing important evidence of a legal kind. The volume is well arranged,

in sections, according to subject. Most of the sections have prefixed to them a brief but always very concise and informative introduction, and the single texts are furnished with introductions, translations, and commentaries. The volume is not a big one but it is extraordinarily full of matter, and the abundant bibliographical references will make it indispensable to editors and students of legal texts. The reputation of the editor is a guarantee of its learning and brilliance. *Juristische Papyri: Erklärung von Urkunden zur Einführung in die Juristische Papyrskunde*. Pp. xx+380. Berlin, Weidmann, 1920. 22 M. It is reviewed by P. DE FRANCISCI (*Aegyptus*, I, 1920, 389-90), MITTEIS (*Z. Sav.-St.*, 1920, 309 f.) and an anonymous reviewer (*Journ. Hell. Stud.*, XI, 1920, 213 f.); and a review by the present writer will appear in this *Journal*.

I know only from a very laudatory notice by K. FR. W. SCHMIDT (*Berl. Phil. Woch.*, XXXIX, 1919, 1043) a booklet by W. SCHUBART on Graeco-Roman Egypt, published as an introduction to an exhibition of papyri in the Berlin Museum. *Das alte Ägypten und seine Papyrus: Eine Einführung in die Papyrusausstellung*. Berlin, 1918, Reimer. Pp. 32. 8°. 75 Pf.

Sir E. WALLIS BUDGE's *By Nile and Tigris* (London, 1920, 2 vols., pp. ix+456, viii+456, many plates) is of course concerned mainly with Egyptology and Assyriology; but information is given as to the author's acquisition of Greek papyri, in particular the Bacchylides and the *Athenaion Politeia*, for the British Museum, and the work can be cordially recommended to papyrologists, not only for its information on such points but also for its general readableness and its many excellent stories. It is reviewed by (among others) M. C. MONDINI (*Aegyptus*, I, 1920, 391-2).

The papyri of course give us much valuable information concerning life in the Egyptian metropoleis, and it is an interesting task to study the evidence for the history and administration of particular cities. We owe to Wessely such a study of Arsinoë; Plaumann has done a like service for the Greek city of Ptolemais and Kühn for Hadrian's foundation Antinoöpolis; the time for dealing with the immense mass of material concerning Oxyrhynchus has not yet come, since so many of the Oxyrhynchus papyri still remain unedited. The treasures of Hermopolis are however nearing exhaustion, and G. MÉAUTIS was well inspired in publishing an excellent monograph on that city. It is indeed limited in its scope; it stops with the fourth century, and it does not deal with the topography of the city; but within the limits he has set himself, the population and especially the municipal government of Hermopolis, the author does valuable work. He makes many acute remarks on the various problems discussed, and advances our knowledge of several points very considerably. At the end he gives a really admirable summary of the city's development and decline, a summary applicable, *mutatis mutandis*, to other municipalities also. It is to be regretted that there is no proper index; and there are several misprints and slips in the references. *Hermoupolis-la-Grande*. Lausanne, Édition La Concorde, 1918. Pp. 215.

The Coptic papyri, so valuable as a source of historical evidence for a period when the Christian church, in Egypt so largely Coptic, was a factor of prime importance, have of course been largely used by students of the ecclesiastical and social life of Egypt, but they have hitherto received but little attention from jurists. It is therefore a matter for congratulation that a jurist of the standing of A. STEINWENTER should have undertaken the systematic study of them, particularly of the Jeme and Aphrodito papyri. As a preliminary to his researches into the more strictly legal aspect of these documents he has found it necessary to study first the administrative system—or, at least, the local administration—of Egypt under the Arabs; and the result is a most valuable monograph on this subject, in which are discussed the powers and functions of various officials, from the Dux to the *lashane* and the *vopaxós*. It seems unfortunately doubtful whether, in the present tragic condition of Austria, he will be able for a long time to come to complete his design; but he, Dr Wessely (in whose *Studien* the present work appears), and the Vienna Academy must be heartily congratulated on his achievement so far; and we can only hope—not for this reason only!—that conditions will in the near future begin to improve. *Studien zu den koptischen Rechtsurkunden aus Oberägypten (Studien zur Pal. u. Pop., XIX)*. Leipzig, Haessel, 1920. Pp. iv+79. This work is reviewed by V. ARANGIO-RUIZ (*Aegyptus*, I, 1920, 382-6); by P. KOSCHAKER (*Z. Sav.-St.*, XLI, 1919, 330-4); and a review by the present writer will appear in this *Journal*.

A dissertation on the policy in Greece of the early Ptolemies (down to Philometor but mainly the first three) by M. L. FRITZE does not deal except incidentally with the papyri, but it may be referred to here as helping to elucidate the character of that state system a part of which it is the function of the papyrologist to study. *Die ersten Ptolemäer und Griechenland*. Diss. Halle, 1917. Pp. 142, with map. Reviewed by F. STÄHKLIN, who points out many inaccuracies and misprints (*Berl. Phil. Woch.*, XXXVIII, 1918, 1133-6).

Banks and banking are of frequent occurrence in the papyri and formed an essential part of the economic world there revealed to us. An article by J. HASEBROEK on the Greek banking system may therefore be referred to, since, though it deals with classical Greece, it is a useful preparation for a study of the banking system of Egypt, more developed than that of Greece but growing out of that. *Zum griechischen Bankwesen der Klassischen Zeit*, in *Hermes*, LV (1920), 113-73. Rather more closely connected with the sphere of papyrology is a valuable little volume by R. HERZOG on a very knotty problem hitherto unsolved, that, namely, of the mysterious *tesserae* till now known as *tesserae gladiatoriae* or *t. consulares*. These he explains, very convincingly, as bank tokens attached to sacks of coin to show that the money was genuine and of good value; the inscription on them is to be read as "spectavit nummos." The official concerned was the *probator* or *nummularius*. He deals, *inter alia*, with the Greek evidence, including that of papyri: the official is the *δοκιμαστής*, the verb being *δοκιμάζω*. On p. 33 he suggests that P. Oxy. VI, 958 is a Greek vellum equivalent of the Roman *tesserae*; perhaps too (p. 34) P. Oxy. V, 957. *Aus der Geschichte des Bankwesens im Altertum: Tesserae nummulariae*. (Abhandl. d. Giessener Hochschulgemeinschaft, I.) Pp. 41, 1 plate. This volume is reviewed by R. STEINERT (*Berl. Phil. Woch.*, XXXIX, 1919, 1081-3) and FR. KOEPP (*Woch. f. klass. Phil.*, XXXVI, 1919, 365-8).

An extremely important volume, which I know from a cursory inspection on the eve of writing this bibliography, is one by K. SETHE and J. PARTSCH on the Demotic papyri, particularly of the Ptolemaic period, as illustrating the Egyptian law of sureties. Sethe deals with the philological questions involved, Partsch with the legal. *Demotische Urkunden zum ägyptischen Bürgschaftsrechte vorzüglich der Ptolemäerzeit*. Herausgegeben und erklärt von K. SETHE. Mit einer rechtsgeschichtlichen Untersuchung von J. PARTSCH. (Abhandl. der sächs. Ak. d. Wiss., XXXII Bd.) Leipzig, B. G. Teubner, 1920. Pp. viii+812, 68 plates.

Another important volume, which again I have not yet had time to study in detail, is that by A. B. SCHWARZ on Graeco-Egyptian documents of the Roman period. The study and classification of documents from the formal point of view is of course a very essential part of legal history, and occupies a prominent place in both Mittels's *Grundzüge* and Meyer's *Juristische Papyri*; but no such elaborate study as this has yet been undertaken with respect to the Greek papyri, and the present volume, from a scholar so competent as Schwarz, is deserving of a hearty welcome. *Die öffentliche und private Urkunde im römischen Ägypten: Studien zum hellenistischen Privatrecht*. (Abhandl. d. sächs. Ak. d. Wiss., XXXI Bd., No. III.) Leipzig, B. G. Teubner, 1920. Pp. 310. This volume is reviewed by MITTEIS (*Z. Sav.-St.*, XLII, 1920, 320-30)¹.

In my last bibliography I was able to refer only very briefly and with no details to a work by H. KRELLER on testamentary law in Graeco-Roman Egypt. Since then I have been able to examine this work and so to confirm my impression that it was one of great importance. A more detailed review will follow later; at present I must content myself with a fuller and more exact reference than was possible last year. *Erbrechtliche Untersuchungen auf Grund der Graeco-ägyptischen Papyrusurkunden*. Leipzig und Berlin, B. G. Teubner, 1919. Pp. xii+427.

Three volumes which are inaccessible to me are: a work on Roman law by G. PACCHIONI which contains a section on papyrology (*Corso di diritto romano*, Torino, 2nd ed., 1919, vol. I, App. XII: *La papirologia e gli studi di diritto romano*, pp. ccxxii-cxxlv; see short notice by Maroi in *Aegyptus*, I, 366); one by E. COSTA on leases in Roman law, making frequent reference to the papyri (*La locazione di cose nel diritto romano*, Torino, 1915; Maroi, *ibid.*); and one by L. GUESOUX on the *cessio bonorum* (*La cessio bonorum*, Paris, Paul Geuthner, 1920, pp. 101; reviewed by P. DE FRANCHISCI in *Aegyptus*, I, 390).

R. GROSSE has published a very important work on the history of the Roman military system from Gallienus to the beginning of the Byzantine themes. It draws its material of course from a much wider field than that of the papyri, but it uses papyrological evidence also and will be a very useful book of reference for students of Byzantine Egypt. *Römische Militärgeschichte von Gallienus bis zum Beginn der byzantinischen Themenverfassung*. Berlin, Weidmann, 1920. Pp. xvi+346.

PREHISTORKE has started at Heidelberg a Papyrus Institute which will publish the results of its researches in a series of monographs. Preisigke himself opens the series with a very interesting volume on the Egyptian conception of the divine fluid. It is a little surprising to find him dealing with a subject of this kind, but he has certainly produced a suggestive piece of work, which will stimulate discussion. It must be confessed, however, that, ingenious as his theory is, it seems in many of its details highly conjectural, and the positive evidence is a little flimsy to bear the whole weight of the superstructure. *Vom göttlichen*

¹ I have not seen this volume of the *Z. Sav.-St.* but only reprints of certain reviews from it. It doubtless contains other items which should have been mentioned in this bibliography.

Fluidum nach ägyptischer Anschauung. (Papyrusinstitut Heidelberg, Schrift I.) Berlin u. Leipzig, 1920, Vereinigung wissenschaftlicher Verleger. Pp. 63. This work is reviewed anonymously in *Journ. Hell. Stud.*, XI, 1920, 230-1.

The palaeography of the papyri is dealt with incidentally in a manual of Greek studies by L. LAURAND which is not at present accessible to me. *Manuel des Études Grecques et Latines*, VII, Paris, 1919, chap. II, *Paléogr. grecque*, chap. III, *Paléogr. latine*. (See *Aegyptus*, I, 405, no. 764.)

In a joint collection of liturgical studies DÖLGER in a section with the title "Sol Salutis," discusses the dream-revelation of Bes in *P. Lond.* I, 122, 64-84. I know this passage from a sheet of proofs kindly sent me by the author and am not sure whether the volume has yet appeared. *Liturgiegeschichtliche Forschungen*, herausg. von Prof. DÖLGER, P. KUNIBERT-MOHLBERG, Prof. RÜCKER. Heft 4-5: *Sol Salutis: Gebet und Gesang im christlichen Altertum mit besonderer Rücksicht auf die Ostung in Gebet und Liturgie.* Von Prof. Dr. FR. L. DÖLGER. Münster i. W., Aschendorff, 1920. M. 25. For *P. Lond.* 122 see pp. 278-82.

4. ARTICLES, REVIEWS¹, MISCELLANEOUS.

Beginning this section with articles of a general character, I may note first three popular lectures, as yet unpublished, by CALDERINI at the Università Popolare of Milan on Apr. 11, 12 and 14, 1920, the titles of which, with a brief indication of their subject, are recorded in *Aegyptus*, I, 1920, 230. The titles are: *La primavera di una scienza nuova*; *La vita pubblica e la grande storia nei papiri*; *Cronaca spicciola e vita privata nei papiri*. Another lecture by Calderini on the theme *Piccola letteratura di provincia nei papiri* at the Circolo Filologico of Milan is mentioned on the same page. An article by G. GHEDISI has indeed been published but is not accessible to me (*Nel mondo dei papiri*, in *Vita e pensiero*, Milan, VII, 1918, 114-9; see *Aegyptus*, I, 117, no. 45). BELL has published an article, originally given as a lecture for the Egypt Exploration Society, on *The Historical Value of Greek Papyri* (*Journal*, VI, 1920, 234-46); and GRENPELL publishes another lecture on *The Present Position of Papyrology* (*Bull. of the John Rylands Library*, VI, 142-62), in which he gives an account of the forthcoming Part XV of the *Oxyrhynchus Papyri*, and of other volumes and undertakings projected or in preparation. Lastly, it may be mentioned that KENYON in his Presidential address to the Hellenic Society, emphasizes the value of papyrology (*Journ. Hell. Stud.*, XI, 1920, XLVI-XLVII).

I may note here the appearance of the new Italian Egyptological journal *Aegyptus*, the first volume of which is now completed. Besides articles on Egyptology and papyrology it contains many very useful features, such as a current bibliography, lists of recent corrections to published papyri, and of re-editions, and miscellaneous Egyptological news. Much to be welcomed also is the concluding double part of vol. VI of the *Archiv für Papyrusforschung*, with the usual admirable reviews of editions by WILCKEN. In view of the present difficult conditions in Germany the further continuance of this invaluable periodical is rendered a little uncertain; but it is to be hoped that the difficulties will be successfully surmounted.

The new part of the *Archiv* just mentioned contains a most interesting article by SCHUBART on the style of the letters of Hellenistic kings. Its occasion is a study of *P. Hal.* I, 166 ff., which he regards, in view of its style, as not proceeding from the chancery but being the composition of Philadelphus himself, probably dictated; and in connexion with it he examines, from the point of view of style, first three other extant letters of Philadelphus and then other letters from kings of the Hellenistic period. He regards a few of them as the work, in whole or in part (revision of a secretary's draft), of the kings, others as proceeding from the chancery, written by clerks of various degrees of accomplishment. At the end he gives a list of extant royal letters of the Hellenistic period. *Bemerkungen zum Stile hellenistischer Königsbriefe*, in *Archiv*, VI, 324-47.

W. OTTO has an article in the same number on the word *θυρίς* in the Serapeum texts of the second century B.C., which he explains as not a window in the apartment of the Macedonian recluse Ptolemy but an audience window (probably in a dwelling assigned to the king), through which the king received petitions, etc. Various subjects growing out of this are discussed, among others the sealing of documents to authenticate them, on which there are some valuable remarks. *Das Audienzfenster im Serapeum bei Memphis*, in *Archiv*, VI, 303-23. In another note Otto points out that the words *πυλῶν* and *θύραι* refer not merely to a gateway but to a part of the palace, and so to the court as the seat of government (cf. the "Sublime Porte"). *Χρηματιστικὸς πυλῶν*, in *Hermes*, LV, 1920, 222-4. Reference may also be made to an

¹ Reviews of publications noticed in the present bibliography are mentioned along with the publications to which they refer. Only the more important reviews are noticed.

Egyptological article by SCHÄFER on the window of audience, in which, however, the subject is treated from the point of view of art. *Der König im Fenster: Ein Beitrag zum Nachleben der Kunst von Tell el-Amarna*, in *Anth. Ber. aus d. Preuss. Staatssamml.*, XL (1918-9), 41-61.

The Imperial rescripts are the theme of an important article by WILCKEN, in which, for the first time, is laid down clearly the difference between the two kinds of rescripts, *epistulae* and *subscriptions*. The argument by which the difference is demonstrated and the tracing of the procedure employed in the case of each kind lead the author into much instructive discussion of points of detail; and the whole article will be found of great value. *Zu den Kaiserreskripten*, in *Hermes*, LV (1920), 1-42. In this connexion may be mentioned an article by A. STEINWENTER on an inscription containing a rescript of Severus and Caracalla. It was found indeed, not in Egypt, but at Wagna (Styria) on the site of the *colonia* of Solva; but the discussion may be useful to the papyrologist, not only from the formal point of view but also for the matter of the inscription if Steinwenter is correct in regarding ll. 6-7 as referring to the *cessio bonorum*. *Ein Reskript der Kaiser Severus und Caracalla über die Privilegien des Collegium centonariorum in Solva*, in *Wiener Studien*, XL, 1918, 1-7. The inscription is also dealt with by A. G. ROOS (*De Rescripto Imp. Severi et Caracallae nuper reperto*, in *Mnemosyne*, N.S., XLVII, 1919, 371-7). Reference may also be made in this place to a review by E. WEISS of Preisigke's *Inschrift von Skaptoparene* (*Lit. Zentralblatt*, LXIX, 1918, 479-80).

In the third (1920) volume of the Milan *Studi della Scuola Papirologica* (3-85) is an extremely useful collection of material illustrating the ethnography of Graeco-Roman Egypt. It is a joint piece of work, divided among the collaborators as follows: Introduction, CALDERINI; Africa and Arabia, M. UNTERSTEINER and CALDERINI; Orient, O. ACCORDI; Asia Minor, Greece, Macedonia, Thrace, N. VOLANI; Illyria, Gaul, Italy, Sicily, CALDERINI; Conclusion, CALDERINI. The whole serves to give a very instructive conspectus of the extraordinary motley of races and languages collected in Egypt during the Hellenistic and Roman periods, and stimulates reflexion in many directions. *Ricerche etnografiche sui papiri greco-egizi*.

ROSTOVITZEFF has published a very noteworthy article on the economic and social policy of the Ptolemies. He gives first a general account of the principles informing that policy and the main outlines of the system based on it, and then adds elucidations of the details and discussions of the evidence in the form of notes on single points. It is a sombre picture, a picture of what might well be called a semi-servile state, that he draws; and though it is possible that the colours are here and there a little exaggerated—one seems to feel in his restrained but none the less evident dislike of the whole system a consciousness of the shadows of Marx and Lenin in the background!—there can be no question as to the importance of his article, an importance due both to Rostovtzeff's well-merited authority on economic matters and to his use of the invaluable unpublished material which will form part of *P. Tebt. III. The Foundations of Social and Economic Life in Egypt in Hellenistic Times*, in *Journal*, VI (1920), 161-78.

The economic and general decay of the Roman Empire, particularly the decay of Hellenic culture, is the subject of an interesting article, not indeed so original or going so deep as that just mentioned, by FR. OERTEL (*Der Niedergang der hellenistischen Kultur in Ägypten*, in *Neue Jahrb. f. d. Kl. Alt.*, XLV and XLVI, 1920, 361-81). This article was originally a lecture given to the "Verein für Klassische Altertumswissenschaft" at Leipzig. Another lecture on the same subject, but as yet unpublished, is mentioned in *Aegyptus* (I, 1920, 228) as having been given by V. ARANGIO-RUIZ at the Università Popolare of Modena, 6 March, 1920. The title was *La crisi del mondo antico*.

In his bibliography of Greek history in the *Year's Work* 1918-9, N. H. Baynes mentions (p. 108) an article by V. V. SBRUYE, which seems to be of some importance, but, being in Russian, is inaccessible to me, on land tenure in Egypt and on the development of the immunity granted to temples under the Ptolemies. It is to be found in the *Zhurnal Ministerstva Narodnogo Prosvyeshcheniya*, section of class. philology, Jan., 1915, 1-64, and July-Aug., 1917, 223-55.

LUMBRUSO contributes to *Aegyptus* some of those letters, constantly illuminating some point or other of ancient history, of which so many examples have appeared in the *Archiv f. Pap.* and other periodicals. In this case they are addressed to Calderini, who is the editor of the new journal. In the first (pp. 5-7) he wishes the undertaking success and proceeds to discuss two passages of Arrian referring to the foundation of Alexandria; in the second (pp. 137-8) he deals with a passage in the letter of the Pseudo-Aristeas. This concerns papyrology only in so far as it refers to the measures of Ptolemy Philadelphus against the delators (*ἐμψανιστῆς*). In the last number appear three letters (pp. 265-8) dealing (1) with Cleopatra's linguistic attainments, with special reference to the article *Ricerche etnografiche* in the *Studi* referred to above; (2) with two Christian parallels to the relations existing in Pagan times between the Alexandrian

merchants and Sarapis; (3) our well-known crux in the exordium of Apuleius, "si papyrus aegyptiam... non spreveris inspicere," which he refers to the contrast between vellum and papyrus, the latter being the cheaper and less esteemed. This, if correct (and it seems likely to be), is interesting, as in Martial's time vellum seems to have been regarded as the less honourable material (see, e.g., E. MAUNDE THOMPSON, *Introd. to Gr. and Lat. Pal.*, 30).

In the sphere of law, as usual, there has been considerable activity. An article (or rather a lecture) of a general character by P. DE FRANCISCI, on the importance of papyrology in the study of legal history, is not accessible to me. *La papirologia nel sistema degli studi di storia giuridica*. Milano, Figli Provvid. 8°. Pp. 18. L. 2. (See *Aegyptus*, I, 406, no. 767 bis.) Equally inaccessible is an article by J. C. NABER on the development of legal formulae (*De formularum origine*, in *Tijdschrift voor Rechtsgeschiedenis*, 1919, 1-16; see *Aegyptus*, I, 128, no. 240).

P. JÖRS continues his valuable discussion (see *Journal*, VI, 140) on the processes of execution and distraint (*Erzrichter und Chrematisten*, in *Z. Sav.-St.*, XL, 1919, 1-97). The new instalment contains § VIII, *Urkundenvollstreckung und Urteilsvollstreckung*. Further sections are to follow.

The diptych published by Grenfell (see *Journal*, VI, 134) has attracted a good deal of attention, and various suggestions have been made for the extension of the mysterious *d. e. r. e. e. b. t. a. s.* Articles on it have been published by MITTEIS (*Griechisch-lateinisches Diptychon vom Jahre 198*, in *Z. Sav.-St.*, XL, 1919, 358-9; suggests for *e. e. b. ex exemplis binis*, "mit folgendem Genetiv"); by F. MAROI (*Un documento bilingue di datio tutelae dell'Egitto greco-romano*, in *Aegyptus*, I, 1920, 139-53; with commentary, largely concerned with the question whether the local authorities were competent to grant a tutor for Romans; suggests *deur. et rec. ex exemplari bibliothecae tabul. superscripto*); and by E. CUQ (*Un diptyque latin sur la tutelle datée des femmes*, in *C.-R. de l'Ac. d. Inscr.*, 1920, 40-56; with a valuable commentary, and the plausible suggestion *descriptum et recognitum ex exemplo brevi tabulae superscriptae*). The text is republished, without comment, in *Rev. Arch.*, x (1919), 407-8.

FR. BRANDILEONE has published an elaborate article on the disputed question as to the *obligatio litterarum* in Greek and Graeco-Roman law, for the most part devoted to an attempted refutation of Mitteis's views on the subject. *Sulla supposta Obligatio litterarum nell'antico diritto greco*, in *Rend. d. R. Acc. di Bologna, Sc. Morali*, IV (1919-20), 57-158.

P. DE FRANCISCI devotes an interesting article to the question of the *datio in solutum*. *La dottrina bizantina della "datio in solutum" di fronte al materiale papirologico*, in *Aegyptus*, I (1920), 302-8.

A joint article is contributed to the new number of the *Arch. f. Pap.* (*Zu den ptolemäischen Prozessurkunden*, 348-60) by R. FEIST, J. PARTSCH, F. PRINGSHEIM, and E. SCHWARTZ, on some notable Ptolemaic texts relating to legal processes. They make numerous suggestions for readings or supplements. The volumes dealt with are *P. Hal.* I, *P. Hibeh*, *P. Magdola*, *P. Petrie* III (25 only). An article by R. TAUBENSCHLAG on the "process" of St Paul is in Polish and not accessible to me (in vol. LXII, 1920, of the memoirs of the Cracow Academy; see *Aegyptus*, I, 408, no. 797 bis); nor have I been able to see one by P. DE FRANCISCI on the *episcopalis audientia* (*Per la storia dell'"episcopalis audientia"*, in *Scritti dedicati alla memoria di O. Scalvanti*, Roma, 1918, p. 45; see *Aegyptus*, I, 366). TAUBENSCHLAG has also a Polish article on the doctrine of evidence in Ptolemaic law (Cracow memoirs, as above; *Aegyptus*, I, 408, no. 798). An article by J. C. NABER on the *litis contestatio* uses papyrological evidence. *Observationes de Iure Romano. LXXXV rescriptum. Quomodo fiat litis contestatio*, in *Mnemosyne*, N.S., XLVIII (1920), 394-424.

F. MAROI, à propos of the document relating to Egyptian notaries published by Schubart (see *Journal*, VI, 132 f.), publishes a brief article on the Egyptian notariate (*Il notariato egizio secondo un papiro tolemaico*, in *Aegyptus*, I, 1920, 366-70). One by A. ASSISI on the history of the notariate, dealing in part with the Graeco-Egyptian world, is inaccessible to me (*L'istituto del notariato nella storia e nella legislazione*, in *Riv. dir. pubbl.*, IX, p. II, 372, 1918; see *Aegyptus*, I, 366).

P. DE FRANCISCI devotes an article to *P. Iand.* 62, a "pigneratio puellae ingenuae," discussing the question whether it is a pledge of a free person or not. He takes up a middle position; the transaction, he concludes, was not a reduction to slavery, it had no *effetto reale*, but the position of the person pledged was slavery *de facto*. The contract was in effect an infringement of the Imperial law against the pledging of free persons; it was in fact one of the evasions which led Justinian in *Nov.* 134 to forbid "anche la locazione delle opere dei figli." *Il P. Iandanae 62*, in *Aegyptus*, I (1920), 71-82.

À propos of *P. Oxy.* 1467 S. SOLAZZI, in an article inaccessible to me, discusses the *Jus liberorum* as affected by literacy or illiteracy. *Jus liberorum e analfabetismo*, in *Rend. Ist. Lombardo* (Milan), s. II, LI (1918), 586-97. (See *Aegyptus*, I, 128, no. 236.)

R. SAMTER discusses the various legal senses in which the word ἀλληλέγγυοι is used, with references to the instances, mainly in papyri, and discussions of them. 'Αλληλέγγυοι, in *Philologus*, LXXV (1919), 414-36.

An interesting article by V. ARANGIO-RUIZ deals with certain legal texts in *P. Cair. Masp.* III, with special reference to the light they throw on the extent to which local and native custom maintained itself against the Imperial law. *Applicazione del diritto giustiniano in Egitto*, in *Aegyptus*, I (1920), 21-36.

The question of irrigation has again received some attention. W. L. WESTERMANN, continuing his work on this subject (see *Journal*, VI, 140), publishes an article of some importance on the meaning of the word ἄσποχος as applied to land. Pointing out that such land often pays as high taxes as the rest, sometimes higher, he maintains that it was not unirrigated but unflooded land; it might possibly be artificially irrigated. The returns of ἄσποχος were therefore made not to obtain an abatement of taxation, but because the Government wished to know of any deviation from the normal method of irrigation. *The "Unirrigated Lands" in Ptolemaic and Roman Egypt*, in *Class. Phil.*, XV (1920), 120-37.

A. CALDERINI is publishing a very useful article on the dykes, canals, sluices, etc., of Graeco-Roman Egypt, in which he collects the evidence on these subjects, illustrating the various uses of the terms. Two instalments have already appeared. These notes will be invaluable for purposes of handy reference. *Ricerche sul regime delle acque nell'Egitto greco-romano*, in *Aegyptus*, I (1920), 37-62, 189-216. Another article by the same scholar deals with the various meanings of the words ὄργανον and μηχανή and of ὄδρευμα. *Appunti di terminologia secondo i documenti dei papiri*, in *Aegyptus*, I, 309-17. A third article of Calderini's on the machines for irrigation is inaccessible to me. *Macchine idrofore secondo i papiri greci*, in *Rend. Ist. Lombardo* (Milan), LIII (1920), 620-31. (*Aegyptus*, I, 412, no. 859.)

An article by ROSTOVITZ with the title Συγγεία Τυπῶρων (*Journ. Rom. Stud.*, VIII, 1918, 26-33), though it deals not with Egypt but with two inscriptions, from Lydia and Thrace respectively, may be referred to here for its general historical importance. The first inscription, which he dates in the third century, refers to the τυπῶρων συντέλειαν, the second (A.D. 202) to συν[τελ]είας (R.'s supplement) βουργαπλῶν. Rostovitz shows the importance of this evidence for the evolution of the new recruiting system, and its disastrous effects on the Roman Empire. R. CAGNAT republishes, with brief remarks, *P. Oxy.* VII, 1022 (referring to recruits). *Bull. de la Soc. Nat. des Antiquaires de France*, 1918, 122-4. Three articles by CALDERINI on military matters are inaccessible to me. *Reclute romane in Egitto*, in *Varietate* (Milan), XV (1918), 303 (also refers to *P. Oxy.* 1022). *La lettera di un comandante romano agli Amici della Sorgente*, in *La Sorgente* (Milan), II (1918), 176 ff. *Guarnigioni romane contro il nazionalismo egiziano*, in *Conf. e prol.*, 1919, 309-18. (For all three see *Aegyptus*, I, 126, nos. 212-4.)

In the sphere of numismatics and metrology there are a number of articles to be recorded. A. SEGRE has been particularly active. One elaborate article he devotes to the Ptolemaic and pre-Ptolemaic currency, dealing, after an introduction on money among primitive peoples generally, with money in Egypt before the Macedonian conquest, with the Ptolemaic monetary system at successive epochs, with Ptolemaic money in Demotic texts, the relations between the Phoenician and Ptolemaic monetary systems, etc. *Circolazione tolemaica e pretolemaica in Egitto*, in *Riv. Ital. di Numism. e sc. affini*, 2. Serie, III (1920), 5-70. In the course of this article (p. 25²) Segre refers to another article of his own on *P. Edgar 5* (relating to the minting of gold under Philadelphus) in the *Atti dell'Istituto Veneto*, but he gives no nearer reference, and the recent numbers of these *Atti* are not accessible to me. Inaccessible also are two other articles of his, one on Byzantine coinage (*Moneta bizantina*, in *Rend. Ist. Lomb.*, LIII, 1920, 296-332; see *Aegyptus*, I, 416, no. 938), and one on the Imperial coinage current in Egypt between Claudius II and Constantine (*Καὶὸν Νόμισμα, moneta imperiale circolante in Egitto da Claudio II a Costantino*, referred to in *Aegyptus*, I, 416, no. 939, as "MAL. s. V, vol. 16 (1920) pp. 95-114"; qu. MAN, i.e. *Mem. d. R. Accad. di Napoli*?). KUBITSCHKE, in a review of *P. Oxy.* XII, has some valuable remarks on various numismatic questions, viz.: § 1, on the reckoning by myriads in the fourth century. Myriads are, he says, equivalent to denarii, even where this is not expressed; 2, on the "Denarkurs" in the fourth century. In this he reckons from *P. Oxy.* 1430 the value of the pound of gold. Then he gives lists of successive values, showing the steady fall in the exchange value of the denarius; 3, on *P. Oxy.* 1411, referring to the refusal of the bankers to accept the Imperial coinage. *Numismatische Zeitschrift*, N.F., II (1918), 213-6. He also reviews (*Num. Zeitschr.*, 1918, 216-31) Viedebant's *Forschungen* (see *Journal*, VI, 137), which is reviewed besides by F. H. WEISBACH (*Berl. Phil. Woch.*, XXXVIII, 1918, 776-81). J. G. MILNE has published an article on *The Shops of the Roman Mint of Alexandria* (*Journ. Rom. Stud.*, VII, 1918, publ. 1920, 154-78).

Turning now to metrology, I may note that J. C. NAHER has concluded the metrological section of his *Observationculae*, using the evidence of papyri as before. He adds notes and corrections for parts 1 and 2,

and a topographical index. *Observationum de iure Romano*, CXI. *De mensurae generibus, Pars tertia*, in *Mnemosyne*, XLVII (1919), 419-44. SKORR writes on the Ptolemaic and pre-Ptolemaic measures (*Misure tolemaiche e pretolemaiche*, in *Aegyptus*, I, 1920, 159-88) and on the Alexandrian measures of Roman and Byzantine days (*Misure alessandrine dell'età romana e bizantina*, *ibid.*, 318-44).

PREISIGKE, in an article not accessible to me, has discussed the methods of payment by bank credits in Roman Egypt. *Barlose Zahlungen im röm. Ägypten*, in *Intern. Monatsschr.*, XIII (1918), Nr. 1. (See *Aegyptus*, I, 258, no. 453.)

W. L. WESTERMANN, in a short article on the chronology of the reign of Probus, uses *P. Oxy.* XII, 1409 as a proof that the cleaning of the canals by Probus was undertaken while he was Emperor, and after A.D. 278, probably, as Lépaule held, in 280-1. He deals also with the date of his accession, which he places some time during July, 276. *The Papyri and the Chronology of the Reign of the Emperor Probus*, in *Aegyptus*, I, 1920, 297-301.

Coming now to the subject of religion, I may note first a lecture (inaccessible to me) by G. FARINA on Egyptian religion. I do not know how far this is of interest to the papyrologist as such. *La religione dell'antico Egitto*, in *Religio*, 3rd fasc.; see *Aegyptus*, I, 228. W. SPIEGELBERG, in an addition to an article on the cemetery of the sacred cows (Isis-cows) of Aphroditopolis, points out that the mysterious *scis, cois* of PSL 328 is not, as Wilcken in his review in the *Archiv* (see below) explains it, *ἁγ=ἁγίος*, "the praised one," but *ἁτ*, the sacred cow. *Die Begräbnisstätte der heiligen Kühe von Aphroditopolis (Atfih)*, in *Oriental. Literaturz.*, XXIII (1920), 258-60.

In an interesting article on the relations of Eudoxus of Cnidus with Egypt G. MÉAUTIS traces the history of Graeco-Egyptian syncretism. He shows, very convincingly, from Orphic sources, that the much-disputed *προφύλας* in Plutarch's account, *De Isid. et Osir.*, c. 6, 353 B-C, of what Eudoxus relates concerning the attitude of the Egyptian priests towards wine, is the true reading. *Eudoxe de Cnide et l'Égypte*, in *Rev. de Phil.*, XLIII (1919), 21-35.

The decree of Ptolemy Philopator concerning the mysteries of Dionysus (see *Journal*, VI, 133) is discussed by P. ROUSSEL, who holds that its object was neither, as Schubart held, to constitute an orthodox doctrine of the mysteries, nor, according to Reitzenstein's view, to regulate in an unsympathetic spirit the secret cults, but to organize the "clergy" and perhaps to revise the titles of private sanctuaries. The *ἱερὸς λόγος* he regards as the explanation and tradition of the rites celebrated in any particular sanctuary. *Un édit de Ptolémée Philopator relatif au culte de Dionysos*, in *C.-R. de l'Ac. d. Inscr.*, 1919, 237-43. The Alexandrian cults of Alexander the Great and Soter are dealt with by A. GARRONI in an article inaccessible to me (*I Culti Alessandrini di Alessandro e Tolomeo Soter*, in his *Studi di Antichità*, Roma, 1918; see BAYNES in *The Year's Work*, 1918-9, p. 121).

L. FAULHABER devotes an important article to the subject of the *libelli* in the persecution of the Christians under Decius, dealing with both literary sources and papyri. He holds that the order to sacrifice to the pagan gods was general, not confined to real or suspected Christians, and that the *libelli* are to be regarded, from the formal point of view, as returns to the officials and, when provided with the required testimony, as certificates, "Opferatteste." He deals with other provinces as well as Egypt. *Die Libelli in der Christenverfolgung des Kaisers Decius*, in *Z. f. Kath. Theol.*, XLIII (1919), 439-66, 617-56. An article, inaccessible to me, by G. GHEDINI on *P. Lond.* v, 1658, apparently discusses the editor's query whether the writer of that letter can be St. Anthony. *Una lettera autografa di S. Antonio abate*, in *Scuola Cattolica* (Milan), March, 1920, 247-50. (See *Aegyptus*, I, 256, no. 418.)

Several articles deal with one or another aspect of social life in Egypt. One by R. RADERMACHER, dealing with *P. Oxy.* II, pp. 39 ff., is inaccessible to me (*Stugsber. Wien. Akad.*, CLXXXVII, 1918, no. 3, 1-140; see *Aegyptus*, I, 408, no. 798 bis; "Contributo allo studio dei costumi popolari dell'antichità"). G. MARRO has published an article on the psychology of the ancient Egyptians, mainly based on a study of the skeletons he has examined. *Sulla psicologia dell'antico Egitto*, in *Atti d. R. Accad. di Torino*, LV (1919-20), 291-308. CALDERINI's inaugural lecture for 1919-20, now published but inaccessible to me, was devoted to the question of labour in Graeco-Roman Egypt. *Aspetti e problemi del lavoro secondo i documenti letterari dei papiri*. Milano, Figli d. Prov., 1920. 8°. Pp. 20. (See *Aegyptus*, I, 228.) In another inaccessible article A. CASTIGLIONI deals with the position of women as illustrated by some recently discovered papyri. *La donna in alcuni papiri recentemente scoperti in Egitto*, in *Vita e pensiero* (Milan), IX (1919), 343-8. T. GRASSI collects, with some discussion, the references in papyri to the subjects of music, dancing, and the mime. *Musica, Mimica e Danza secondo i documenti papiracei greco-egizi*, in *Studi d. Sc. Pap.*, III, 117-35. TH. REINACH discusses the Germanic sceress mentioned in the ostrakon published by Schubart (see

Journal, vi, 133). *Une sorcière germaine aux bords du Nil*, in *Rev. Ét. Anciennes*, xxii (1920), 104-6. C. J[ULIAN] adds a note.

W. WEINBERGER, in a brief note, denies that Callimachus was ever librarian, against a recent revival by Sitzler of the view that he was. *Gehört Kallimachos zu den alexandrinischen Bibliothekaren?*, in *Berl. Phil. Woch.*, xxxix (1919), 72.

In the sphere of topography, reference may be made to J. CLÉDAT's *Notes sur l'Isthme de Suez* (*Bull. Inst. fr. d'arch. or.*, xvii, 1920, 103-19; viii, *Les Canaux*; ix, *Le Canal de Zaron*; x, *Les Routes*; xi, *Ἀφραίων*).

J. G. SMYLY, in an interesting article, restores (so far as the sense goes) the two arithmetical problems in PSI. 186, making many valuable remarks on the Akhmim papyrus and arithmetical methods generally, and on the reckoning of the artaba and the *naubion* or *oailion*. *Some Examples of Greek Arithmetic*, in *Hermathena*, xlii (1920), 105-14.

One or two articles dealing with palaeographical questions have now to be noticed.

G. TANZI-MIRA has published a useful note on the decorated *paragraphoi* of literary papyri. She collects facsimiles of 33 instances of all periods and discusses them. The *paragraphos* occurs in the *Persae* papyrus, but is not frequent in the Ptolemaic period. It is most common in the second century of our era, less so in the third, more frequent in the fourth, rare later. [It may be noted that one occurs in the British Museum papyri of Dioscorus's "poems" (sixth cent.).] *Paragraphoi ornate in papiri letterari greco-egizi*, in *Aegyptus*, i (1920), 224-7. WILCKEN discusses the subscription of the Didymus papyrus. He points out that $\kappa\eta$ was the end of the original subscription; the rest was added (by the same scribe) later. Hence $\kappa\eta$ is an ordinal, not a cardinal, number: "28th book," which is the third on the Philipics. *Die Subscription des Didymus-Papyrus*, in *Hermes*, lv, 324-5. An important article by T. W. ALLEN advances a new theory as to the origin of the minuscule hand of vellum MSS. Pointing out certain differences from the minuscule cursive hands seen, e.g., in the Aphrodito papyri of the Arab period, he suggests that it developed, not from that type of hand, but from a concurrent and slightly different type of cursive. He finds its place of origin in the Studium. The shortage of papyrus due to the Arab conquest may, he suggests, have been one reason for the supersession of the uncial by the minuscule hand. Some of his statements and arguments are open to question, but the article as a whole is certainly deserving of very serious consideration. *The Origin of the Greek Minuscule Hand*, in *Journ. Hell. Stud.*, xl (1920), 1-12. A. GROHMANN, who is engaged on an important volume of "protocols" of the Arab period, publishes an article, in which the problem of the protocol is referred to, on the question as to the government monopoly of the manufacture of papyrus. He holds that there was a government monopoly in later times, the purpose of the protocol being to make one sheet in each roll unusable and thus increase the sale of papyrus. *Die Papyrusherzeugung als Staatsmonopol*, in *Ber. d. Forsch.-Inst. f. Osten u. Orient in Wien*, iii (1919), 3-14. An article by V. GARDTHAUSEN on the protocol, with reference to the comparatively legible specimen of the Byzantine period published in *P. Cair. Masp.* ii (apparently not the later one in vol. iii), is inaccessible to me. *Protokoll*, in *Z. d. deutsch. Ver. f. Schriftw. u. Schrifttum*, 1919, 97-107. It is reviewed in *Berl. Phil. Woch.*, xl (1920), 353, by W. WEINBERGER, and in *Woch. f. Kl. Phil.*, xxxvii (1920), 148-9, by K. PREISENDANZ.

Several articles belong to the sphere of lexicography. A. CASTIGLIONI collects from the papyri instances illustrating, if possible, the use, size, and material of various kinds of vases and similar vessels. A further instalment is to follow later; the present one includes $\kappa\acute{\alpha}\delta\omicron\varsigma$, $\lambda\epsilon\kappa\acute{\alpha}\nu\eta$, $\lambda\eta\kappa\upsilon\beta\omicron\varsigma$, $\pi\omicron\tau\eta\rho\iota\omicron\nu$, $\sigma\tau\acute{\alpha}\mu\upsilon\varsigma$, $\phi\upsilon\acute{\alpha}\lambda\eta$. *Contributi alla nomenclatura dei vasi secondo i papiri greco-egizi*, in *Studi d. Sc. Pap.*, iii, 136-48. L. PANDINI discusses, first, the occurrence of γ or χ in the oblique cases of $\delta\iota\omega\pi\upsilon\epsilon\varsigma$, second, the gender of the word. (1) γ is the regular and only form in the Ptolemaic period, χ appears but is less common in the Roman, γ alone appears in Byzantine papyri. Yet Phrynichus says that χ was the archaic form. Probably, therefore, χ was Attic, γ belonged to the *κοινή*. The emergence of χ in the Roman period perhaps indicates dialectal pronunciation. (2) The gender is regularly feminine but twice masculine. *Osservazioni ortografiche e grammaticali al termine $\delta\iota\omega\pi\upsilon\epsilon\varsigma$ nei papiri*, in *Aegyptus*, i (1920), 222-4. By way of supplement to Preisigke's article on $\pi\acute{\epsilon}\rho\upsilon\varsigma$ (see *Journal*, vi, 141), E. MEYER cites in confirmation of his explanation an instance in the New Testament (Mark xii. 1) and some other occurrences ($\Pi\Upsilon\Phi\omicron\varsigma$, "Wirtschaftsgebäude," in *Hermes*, lv, 1920, 100-2); but A. ALT questions the correctness of his explanation in three of the cases adduced (Noch einmal $\Pi\Upsilon\Phi\omicron\varsigma$, "Wirtschaftsgebäude," *ibid.*, 334-6). K. FR. W. SCHMIDT continues (see *Journal*, vi, 144) his *Zu griechischen Urkunden aus Ägypten*, a study of proper names which occur in papyri (*Berl. Phil. Woch.*, xxxviii, 1918, 906-12, 1073-80). J. MOFFAT publishes some notes, containing nothing very novel, on grammatical and linguistic parallels to the New Testament in *P. Oxy.* xiv. *Pickings from the New Papyri*, in *The Expositor*, 8 S., xlvi (1920), 138-42.

B. LAUM has published an important article on the Alexandrine and Byzantine systems of accentuation, giving the main results of a thesis which received the prize of the Berlin Academy but which the difficulties of the time have prevented him from publishing in full. He makes special use of papyri. *Alexandrinisches und Byzantinisches Akzentuationssystem*, in *Rhein. Museum*, N.F., LXXIII (1920), 1-34. Another interesting article on accentuation is one by C. M. KNIGHT on the change from the ancient (pitch) to the modern (stress) accent. She uses, *inter alia*, the evidence of papyri. Her article is very useful; but she is hardly justified in using the confusion of *e* and *ai* (alike in accentuated and unaccentuated syllables) as a proof of stress accent, and she should not speak of the Coptic pronunciation in the Ptolemaic period. *The Change from the Ancient to the Modern Greek Accent*, in *Journ. of Phil.*, XXXV (1919), 51-71.

A. CALDERINI and M. C. MONDINI have published a very full and elaborate bibliography of Italian work in the sphere of Egyptology and papyrology. It is an excellent piece of work; but it is perhaps doubtful whether a bibliography of this kind, confined to one country and including many items now obsolete by the mere lapse of time, can be of sufficient practical utility to justify fully the immense labour that must have been expended on it. *Rassegna degli studi italiani di egittologia e di papirologia*, in *Studi d. Sc. Pap.*, III, 159-341. F. MAROI has published some additions to this list drawn from juristic literature (*Addizioni bibliografiche di papirologia giuridica*, in *Aegyptus*, I, 1920, 363-6); CALDERINI, *à propos* of it, discusses the history and present condition of papyrology and Egyptology in Italy, appealing for more attention to these subjects (*Gli insegnamenti di una bibliografia*, in *Nuova Antologia*, LV, 1920, 344-52); and C. BABBAGALLO, in an article inaccessible to me, also seems to discuss this bibliography, though I may be mistaken in referring his article to it (*Un' iniziativa della scuola papirologica milanese*, in *Nuova Riv. Stor.*, II, 1918, 97; see *Aegyptus*, I, 117, no. 37). CALDERINI discusses the future of papyrology in Italy in a lecture, separately published, which I have not been able to see. *Per l'avvenire della papirologia in Italia*. Milano, 1919. (See *Aegyptus*, I, 117, no. 42.)

The new periodical *Aegyptus* is publishing, as I have already mentioned, lists of recent corrections to papyrus texts. The first list appears in I, 232-4, the corrections being taken from Oertel's *Liturgie* and Meyer's *Griechische Texte*. On pp. 371-2 of the same periodical appears a list of recent re-editions of Greek papyri, referring in this case to Meyer's *Juristische Papyri* and some republications in Rabel's *P. Basel*. Both these features of *Aegyptus* will be of very great utility to papyrologists. In the Milan *Studi* (III, 149-55) VITELLI publishes a number of corrections and additions to PSI. IV and V, omitting, however, with a few exceptions, the Zeno papyri. Many of these corrections are due to Grenfell, others to Jouguet.

It remains to notice such reviews as have not already been referred to. *P. Oxy.* x-xii are reviewed by WESGER (*Papyrologische Neuerscheinungen während der Kriegszeit. Neue Rechtsurkunden*, III, in *Krit. Vierteljahrsschr. f. Ges. u. Rechtsw.*, LIV, 1918, 30-63) and WILCKEN (*Arch. f. Pap.*, VI, 418-24); *P. Oxy.* x alone by LEWALD (*Vierteljahrsschr. f. Ges. u. Wirtschaftsgesch.*, XII, 473-83); G. BORTOLUCCI (*Aegyptus*, I, 1920, 237-40), and LESQUIER (*Rev. Égypt.*, I, 279-81); *P. Oxy.* XII by J[OUGUET] (*ibid.*, 282-4), H. RÖDER (*Papyrusfundus i Oxyrhynchus*, in *Nord. Tidsskr. f. Fil.*, VI, 1917, 152-6), and BORTOLUCCI (*Aegyptus*, I, 240-3); *P. RyI.* II by WESGER (*Krit. Vierteljahrsschr. f. Ges. u. Rechtsw.*, LIV, 63-70) and WILCKEN (*Arch. f. Pap.*, VI, 371-80); PSI. III and IV by WESGER (*Vierteljahrsschr. f. Ges. u. Rechtsw.*, LIV, 72-81); PSI. III-V by WILCKEN (*Arch. f. Pap.*, VI, 380-402); PSI. IV and V by WESSLY (*Byz.-Neogr. Jahrb.*, I, 1920, 205-8). Corrections for PSI. V are noted by GRENFELL (*Year's Work*, 1918-9, p. 5); and M. NORSIA, before the appearance of PSI. VI, published a preliminary notice of that volume (*Un nuovo prossimo volume di papiri della Società Italiana*, in *Aegyptus*, I, 63-70). *P. Cair. Masp.* III is reviewed by LEWALD (*Z. Sav.-St.*, XLI, 1920, 310-19); *P. Lond.* V by the same (*ibid.*) and WILCKEN (*Arch. f. Pap.*, VI, 444-7); *P. Hamb.* I by LEWALD (*Vierteljahrsschr. f. Ges. u. Wirtschaftsgesch.*, XII, 473-83); *P. Flor.* III by WILCKEN (*Arch. f. Pap.*, VI, 425-36) and WESGER (*Krit. Vierteljahrsschr. f. Ges. u. Rechtsw.*, LIV, 73-5); *P. Lond.* IV by WILCKEN (*Arch. f. Pap.*, VI, 437-8) and all four parts by H. RÖDER (*Nord. Tidsskr. f. Fil.*, VII, 1918, 47-8); *P. Mon.* I by WILCKEN (*Arch. f. Pap.*, VI, 440-3); Meyer's *Griechische Texte* by the same (*ibid.*, 403-8) and VITELLI (*Aegyptus*, I, 101-3); *P. Basel* by WILCKEN (*Arch. f. Pap.*, VI, 436-7), A. STEINWENTER (*Deutsche Literaturzeitung*, XXXVIII, 1920, 598-600), K. FR. W. SCHMIDT (*Berl. Phil. Woch.*, XXXVIII, 1918, 535-8), and V. ABANGIO-RUIZ (*Aegyptus*, I, 377-82); the *Prinz-Joachim-Ostraka* by LESQUIER (*Rev. Égypt.*, I, 275); Plaumann's *P. Gradensis* by WILCKEN (*Arch. f. Pap.*, VI, 365-6); *P. Freib.* I and II by the same (*ibid.*, 408-12); Minns's Avroman documents by the same (*ibid.*, 369-70); Preisigke's *S.-B.* I by the same (*ibid.*, 412); publications of isolated papyri in periodicals, etc., by Meyer, Schubart, and Schönbauer, by the same (*ibid.*, 366-7, 412-15, 367-9); the Milan *Studi* I and II by WESGER (*Krit. Vierteljahrsschr. f. Ges. u. Rechtsw.*, LIV, 1918, 81-8); parts 13, 14, and 17 of the *Stud. z. Pal. u. Pap.* by WILCKEN (*Arch. f.*

Pap., vi, 415-6), and Martin's publication of a papyrus from Mendes in part 17 by C[ALDERINI] (*Aegyptus*, i, 249-50) and MÉAUTIS (*Rev. Égypt.*, i, 275-6).

Of monographs and articles, Lesquier's *Armée romaine* is reviewed by N. H. BAYNES (*Journ. R. As. Soc.*, 1920, 355-64), H. I. BELL (*Journal*, vi, 222-4), COLLART (not accessible to me; referred to in *Aegyptus*, i, 126, no. 216, as *Rev. Crit.*, LIII, 1919, 348-52), and S. R[EMACH] (in *Aegyptus*, i, 259, no. 468, given as *Rev. Arch.*, s. V., vol. x, 1919, 264, but this reference seems to be a blunder; qu. x, 1920, which is inaccessible to me); Schubart's *Einführung*, by F. ZUCKER (*Woch. f. Klass. Phil.*, XXXVI, 1919, 289-94, 313-23), A. STEIN (*Lit. Zentralbl.*, LXIX, 1918, 814-5, 835-6), K. FR. W. SCHMIDT (*Berl. Phil. Woch.*, XXXVIII, 1918, 1235-6), and CALDERINI (*Aegyptus*, i, 105-10); Oertel's *Liturgie* by M. GELZER (*Berl. Phil. Woch.*, XXXVIII, 1918, 555-62) and P. DE FRANCISCI (*Aegyptus*, i, 1920, 243-6); Preisigke's *Antikes Leben* by H. ROEDER (*Nord. Tidsskr. f. Fil.*, VII, 1918, 47-8); v. Druffel's *Pap. Studien* by WILCKEN (*Arch. f. Pap.*, VI, 443-4) and A. STEINWENTER (*Gött. Gel. Anz.*, CLXXXI, 1919, 30-43); Gardthausen's *Die griech. Handz.* and *Di enau* (see *Journal*, vi, 144) by W. WEINBERGER (*Berl. Phil. Woch.*, XXXVIII, 1918, 1060), and the former by F. ZUCKER (*Woch. f. Klass. Phil.*, XXXVI, 1919, 101-2); Weinreich's *Neue Urk. z. Surapia-Rel.* by ROSCHER (*Lit. Zentralbl.*, LXX, 1919, 983-4); and Enger's *Observationes ad Aeg. pert. adm.* (see *Journal*, vi, 139) by J[OUGUET] (*Rev. Égypt.*, i, 281-2).

Obituary notices of Mahaffy have been published by JOUGUET (*Rev. Égypt.*, i, 1919, 259-60) and HUNT (*Aegyptus*, i, 217-21), of G. Castelli, G. Fraccaroli and A. Barsanti by CALDERINI (*Studi d. Sc. Pap.*, III, 345-7), and of J. H. Moulton by J. M. VOSTÉ (*ibid.*, 348). The well-known and able scholar G. A. GERHARD died, as I hear from Prof. Wenger, in the spring of 1919 at Vienna on his way to Czernowitz. ZUCKER has now left Tübingen for Jena, his place at the former being taken by W. WEBER. I owe to Prof. Rostovtzeff, through Mr F. Ll. Griffith, the following account of the death of another distinguished scholar: "I have just received the sad news of the death of another scholar in the domain of Egyptology—Prof. M. M. CHVOSTOV. He was known as one of the best students of Greek and Roman Egypt. He contributed two large works on the economic history of Egypt in Greek and Roman times: (1) *Investigations into the history of exchange under the Hellenistic monarchies and the Roman Empire*. I. *History of the oriental commerce of Graeco-Roman Egypt*. Kazan, 1907. (2) *Studies on the organization of industry and commerce in Graeco-Roman Egypt*. I. *The Textile Industry*. Kazan, 1914. He was professor of ancient history at Kazan, on the Volga. In 1918, when the Bolsheviks occupied Kazan, he fled to Tomsk in Siberia. Here he perished in 1920, either killed by the Bolsheviks or from a natural death caused by the hardships of life under the Bolshevik régime."

I have already mentioned the foundation at Heidelberg of a Papyrusinstitut under the direction of PREISIGKE. I hear from Prof. OTTO that a Historische Abteilung des Instituts für Papyruskunde at Munich has now been established. One pupil of Otto's has nearly finished a work on the important and promising subject of *Landwirtschaft im alten Ägypten*, and another one on *Götter u. Tempel im hellenistischen Ägypten*.

BIBLIOGRAPHY: GRAECO-ROMAN EGYPT

B. GREEK INSCRIPTIONS (1920)

By MARCUS N. TOD, M.A.

IN my last Bibliography (*Journal*, vi, 214 foll.) I gave some account of the books and articles published in the years 1915 to 1919 inclusive which dealt with Greek inscriptions discovered in Egypt. In the present Bibliography I attempt to bring the record down to the close of 1920, including in it one or two items inadvertently omitted from my previous summary. That my account is complete I dare not claim under present circumstances, which render the transmission of foreign books and periodicals slow and uncertain, and I must leave it to future Bibliographies to make good the shortcomings of the present.

To the full and valuable discussion of the Roman army in Egypt published by J. LESQUIER (*L'armée romaine d'Égypte d'Auguste à Dioclétien in Mémoires de l'Inst. Français du Caire*, xli), and ably reviewed by H. I. BELL in this *Journal* (vi, 222 foll.), an appendix is added containing forty-five inscriptions of the Roman period which are of interest for the history of that army but are not included in easily accessible collections. Attention may also be called to a review, by J. OFFORD, of the Egyptian section of the *Ancient Greek Inscriptions in the British Museum*, Part iv (*Ancient Egypt*, 1920, 28 foll.).

In the recently issued fascicule of the *Bulletin de la Société Archéologique d'Alexandrie* (iv, 3, No. 17) the editor, E. BRECCIA, makes several contributions to epigraphical and numismatic studies, in addition to a very full review of Lesquier's above-mentioned book (p. 251 foll.). A hoard of Alexandrian coins of the imperial period, many of them bearing Greek legends, is described and analysed: they extend from the reign of Vespasian to that of Gallienus, reaching their maximum frequency under Alexander Severus (231 foll.). An interesting epitaph of the Alexandrian monk Theopemptus, dated 516 A.D., is the earliest extant example of its class and throws fresh light on the convents of the Ennaton (179 foll.), while from Abūkir (Canopus) the Alexandrian Museum has acquired a dedication set up by two brothers *ὑπὲρ βασιλέως Πτολεμαίου* (Euergetes II) *καὶ βασιλίσσης Κλεοπάτρας* (either II or III) *Μητρὶ θεῶν εὐαντήτῳ* (188 foll.).

The other inscriptions from Lower Egypt are few in number and of slight interest. The Metropolitan Museum in New York has acquired, and E. R[OBINSON] has published (*Bull. Metr. Mus.*, xiv, 171 foll.), a herm of Herodotus, bearing the inscription *ΗΡΟΔΟΤΟΣ*, which was found at Benha and may be attributed to the second century of our era. Nineteen inscribed stelae from the Graeco-Jewish cemetery of Tell el-Yehūdīyah have been published by C. C. EDGAR (*Annales du Service*, xix, 216 foll.). They consist of rectangular slabs of limestone, usually in the form of a gabled *naos*: three of them are dated in the reign of Augustus, and it is probable that the majority of the remainder also belong to the same period. The first inscription of the series, however, a metrical epitaph in three elegiac couplets, bears the date *ΛΝΔ*, which must refer to the fifty-fourth year of the long reign of Ptolemy Euergetes II. A. PLASSART has published (*Bull. Corr. Hell.*, xi, 357 foll.) notes on the mosaic inscriptions and the Rhodian amphorahandles found by J. Clédat among the ruins of the Roman outpost at Sheikh Zoueda, correcting and restoring the texts as edited by the discoverer (*Annales du Service*, xv, 15 foll.).

Turning to Middle Egypt, we may note a fifth instalment of G. LERKVRE's epigraphical articles on Graeco-Roman Egypt (*Annales du Service*, xix, 37 foll.), in which the writer discusses an interesting group of documents under the general title of "ΙΕΡΑ ΑΣΥΛΑ du Fayoum." We now possess eleven stelae, containing eight different inscriptions, recording the grant of the privileges of *ἀσυλία* by the Ptolemies to the Synagogue of Leontopolis and to temples at Athribis, Magdola, Theadelphia and Euhemeria. Those relating to Leontopolis and Athribis appear in DITTENBERGER, *Or. gr. inscr. vol.* 129, 761: that from Magdola is still unpublished. In the present article three stelae, discovered at Theadelphia (Baṭn Hārīt) in 1917 and transported to the Cairo Museum, are published for the first time: two of them give copies of the same text, set up in the sanctuary of Isis Sachypsis early in 93 B.C., the third gives a further copy of a document, already known in two examples, from the temple of Pnepheros, dated towards the close of 57 B.C. Improved versions are also given of the two *ἀσυλία*-inscriptions from Euhemeria (Qasr Benāt), of

one of which, very faultily published in 1912, the missing portion has recently been acquired by the Service of Antiquities. LEFÈVRE adds (*ibid.* 57 foll.) some valuable remarks on this group of texts, on the rights involved in the privilege of *ἀσυλία*, and on the policy which underlay its liberal bestowal by the Ptolemies on the sanctuaries of the Fayûm. The excavations at Theadelphia also brought to light two copies, one a slightly abbreviated version of the other, of a text in which a Thracian, who held the office of gymnasiarch in 150/49 B.C., dedicated the portal and door of the gymnasium to Hermes and Herakles (*ibid.* 63 foll.). A dedication to the same divinities by an *ephebos*, dated probably in 157/6 B.C., has been acquired by the Cairo Museum authorities at Medinet el-Fayûm and comes in all likelihood from the same site (*ibid.* 64).

A short *graffiti* from one of the columns of the "tomb of Petosiris" at Tunah has raised an interesting and difficult problem. It is assigned by Grenfell, Edgar and Lefèvre to the third century B.C., while Golénischeff on the other hand dates the monument, on the strength of its hieroglyphic inscriptions, to the early part of the Roman period (*Journal*, VI, 294; for the tomb of Petosiris cf. *Aegyptus*, I, 355 foll.).

The Greek *graffiti* of the Memnonion, or temple of Sethos I, at Abydos have been published by P. PERDRIXET and G. LEFÈVRE in a sumptuous volume entitled *Les Graffites Grecs du Memnonion d'Abydos* (Berger-Levrault, Nancy and Paris, 1919). The wisdom of restricting a book of this nature to an *édition de luxe* of 280 numbered copies may well be questioned, but the work itself has been carried out in an exemplary manner, which reflects the highest credit on authors and publishers alike. In a full and careful Introduction the history of the Memnonion, the oracles of Sarapis and Bes, the nature of the *ἐγκύριοι* and the previous publications of the *graffiti* are discussed. The 671 *graffiti* themselves, very many of them previously unpublished or published only partially or incorrectly, are illustrated by facsimiles in the text or by the ten plates in heliogravure which enrich the volume, and are accompanied by an adequate commentary, while due attention has been paid to that indispensable adjunct of a work of this kind, the Index, a glance at which serves to bring out the wide range of interest opened out by these documents, covering as they do a period of well nigh a millennium.

The tombs of the kings at Thebes have yielded an even larger number of *graffiti*, and in an interesting article (*Comptes rendus Acad. Inscr.*, 1920, 107 foll.) J. BAILLET outlines the work of earlier scholars in copying and publishing them and forecasts as imminent the issue of a volume containing no fewer than 2105 such inscriptions. While making no attempt to exaggerate their importance, he points out some of the ways in which considerable value attaches to these rude and unofficial memorials left by visitors to the tombs, e.g. in making clear to us the interest excited by the *syringes*, the vast area from which tourists and traders were attracted to them, their comparative popularity and their condition in the Greek and Roman periods, and in furnishing us with the names, nationalities and professions of so large a number of visitors. Among these were included in the Roman period two citizens of distant Marseilles (J. BAILLET in *Séances et Travaux du Congrès français de la Syrie*, 3-5 janvier, 1919: Paris, Champion, quoted in *Rev. Ét. Anc.*, XXII, 50). W. Vollgraff proposes to emend a metrical epitaph, recently discovered at Thebes and published by T. Reinach (*Rev. Ét. Gr.*, XXVIII, 55 foll.: cf. *ibid.* 375), by substituting *ἐλ γοῦν* for *ἡ γοῦν* in line 8 (*Mnemosyne*, XLVII, 54).

At this point the present Bibliography should, strictly speaking, reach its conclusion; I cannot, however, refrain from mentioning two articles which make use incidentally of epigraphical evidence to throw light upon Egyptian history and cult. In his investigation of the relations between Greece and Egypt between 405 and 342/1 B.C. (*Rev. Égyptologique*, I, 1919, 213 foll., 217), P. Cloché discusses a fragment of an Attic decree (*I.G.* II 60 = *I.G.* II et III, ed. min., 119), which is of considerable importance for the chronology of the reign of the Egyptian king Tachos, and also an inscription from Mylasa (Hicks-Hill, 133; DITTENBERGER, *Sylloge*², 167) relative to Maussollus. The same periodical (I, 1919, 81 foll.) contains an interesting account by P. Roussel of the sanctuaries of the Egyptian divinities at Delos and Eretria which have been recently excavated and have, both by their architectural remains and by their epigraphical texts, thrown some fresh light upon the worship of those divinities in Greek lands. A recently published inscription from Macedonia affords the first evidence for the cult of Horus-Harpocrates in that area (*British School Annual*, XXIII, 86 foll.).

NOTES AND NEWS

PROFESSOR PEET sends us the following account of the general results of the first few weeks of the Society's excavations at El-Amarna:

"The site chosen for the Society's excavations this season is that known to Egyptologists as Tell El-Amarna. Here lie the ruins of the city of Akhetaten, built about the year 1370 B.C. by one of the most remarkable characters who ever sat upon the throne of Egypt, Amenophis IV or, as he afterwards renamed himself Akhenaten. This king at an early date in his reign, and probably when still little more than a boy, gave himself up entirely to the monotheistic worship of the Sun's Disk or Aten, a deity which had already in the previous reign risen to a position of great importance in the Egyptian state. Deserting Thebes and its temples the young king moved his capital downstream to Akhetaten where he founded his new city, and lived, devoted to the worship of the Disk, for about 11 years, regardless of threatening storms abroad and at home.

"It is this city which the Egypt Exploration Society is now laying bare, and it is now once more possible to walk about the streets of Akhetaten and to penetrate the innermost recesses of its houses. The typical house stands in a spacious enclosure. It is built of mud-brick, and its rooms are roofed with wood and reeds, supported where necessary by columns of wood set on stone bases. In the centre of the house was the Central Hall whose walls, standing higher than those of the surrounding rooms enabled the room to be lighted by a kind of clerestory. In this hall is always found a flat stone tank, possibly used for washing before meals, and draining off into a vase of pottery or stone. In or near the centre of the room is a large open brazier of pottery in which are still to be seen the ashes of the fire used for warming the room, or, less likely, for cooking the meals. Opening into the Central Hall are two long rooms, one on the North and one on the West, each of which seems to have had a broad low window in its outer wall which turned the room into a kind of half open loggia. East or South of the Central Hall there is usually a staircase, half of brick, half of wood, which led up from the interior of the house to the roof. Other apartments include women's quarters, men's quarters, and a bathroom containing a stone bath similar to, but not to be confused with the tank in the Central Hall. In the store rooms remains of the wine and oil jars are still to be found, often marked in ink with the name and quality of their contents. One householder had certainly had things more valuable to conceal, for he had built a small bricked pit under the brick floor of his Central Hall. At the time when the town came to be deserted he had taken up the bricks of his floor, broken up the securely plastered stone lid of the pit and removed his treasure, evidently in considerable haste, for he dropped a scarab of lapis lazuli with gold setting on the floor beside the pit.

"The garden contains a great well, granaries, stables, a cooking place with pottery ovens, a summer-house, and often the remains of trees. Everywhere are traces of the gaiety and brightness which seem to have characterized the worship of the Sun's Disk and its devotees. The living rooms were coated with brightly painted plaster, and each day brings to light dozens of fragments of charming blue-glaze finger rings, of amulets, beads, and daintily designed coloured tiles.

"Not the least interesting among the finds are Minoan pottery, imported probably from Rhodes, and a tablet written in Cuneiform, perhaps a stray member of the great hoard of diplomatic documents found here more than thirty years ago."

Photographs of the tablet alluded to in Professor Peet's last sentence have reached the British Museum, and it is pronounced by the authorities there to be written in Assyrian and not in Babylonian. It consists of a list of different kinds of woods, and is of high palaeographical importance.

As regards other excavations, report has reached us of the discovery at Dêr el-Bahri by the New York expedition of a wonderfully fine Eleventh Dynasty sarcophagus belonging to a princess named Menthotpe. This resembles one found on the same site by the Egypt Exploration Society, but is full of inscriptions. Inside it was a fine wooden coffin. At the Tombs of the Kings Lord Carnarvon has been working, but as yet without result. Professor Petrie and his assistants have been busy at Lahun, Gurob and Herakleopolis Magna. On the last-named site a systematic investigation of the cemetery is in progress, and remains of some important tombs of the Viziers Prahotpe and his son Ra-hotpe (*temp.* Ramesses II) have been found.

An exhibition of Ancient Egyptian Art, to be opened at the end of April or at the beginning of May, has been arranged by the Committee of the Burlington Fine Arts Club in conjunction with our Society, and it is hoped to bring together there the finest specimens of old Egyptian handicraft existing in this country outside the British Museum. The magnificent collections of Lord Carnarvon and Rev. Wm. Macgregor are to be largely represented, and valuable promises of help have been received from many other quarters. The owners of particularly beautiful specimens, who would be willing to have them exhibited, are requested to communicate immediately with the Secretary of the Burlington Fine Arts Club, 17, Savile Row, W. 1. The Exhibition will be open to all members of the Egypt Exploration Society.

The Library of the Society has been doubled in size by a very munificent gift on the part of Sir Herbert Thompson. His presentation consists of a collection of many hundreds of volumes, among them complete sets of most of the more important Egyptological periodicals, as well as many rare and valuable archaeological and philological works, besides a handsome mahogany bookcase. The making of a card-catalogue has commenced, and when this is complete steps will immediately be taken to make the Library available to Members. Mr F. W. Percival has accepted the post of Hon. Librarian, and appeals to all who are interested for offers of additional books.

Six lectures have already been given by the Society in the present season, and have more than maintained their previous popularity; indeed, on one occasion at least, Members arriving at the last moment were unable to obtain seats in the completely filled room placed at our disposal by the Royal Society. The subjects and dates of the meetings were as follows: Oct. 28th, Mr P. E. Newberry on "Tell el-Amarna—the predecessors of Akhenaten and the influence of Thebes and Heliopolis on the art and religion of the Heretic City"; Nov. 25th, Prof. G. Elliot Smith on "The royal mummies"; Dec. 19th, Mr A. M. Blackman on "The Position of Women in the Ancient Egyptian Priesthood"; Jan. 20th, 1921, Dr H. R. Hall on "Egypt and the Outer World in the Tell el-Amarna period"; Feb. 23rd, Prof. C. G. Seligman on "Ancient Egyptian survivals in Modern




Egypt"; Mar. 17th, Mr H. Idris Bell on "Hellenism in Egypt." Looking ahead, we anticipate a most interesting lecture on April 27th from the well-known Assyriologist Prof. S. Langdon, who has promised to address us on "The early chronology of Sumer and Egypt and similarities of their culture."

After considerable delay, the volume on Balabish by Mr G. A. Wainwright (to whom our congratulations on his appointment as Inspector-General of the Service of Antiquities for Upper Egypt!) has now been issued, and can be obtained on application to the Secretary. It contains a very careful account of the important cemeteries excavated on that site in 1914, and is illustrated by twenty-five Plates in photograph and line. The published price is 42s., the price to Members being 28s.

It is with sincere regret, which will be shared by all who are interested in Egyptology, that we record the death of Dr Jesse Haworth, who has been a very good friend and patron both to our Society and to Egyptology generally. Born in 1835, his active interest in the science does not seem to have been awakened until 1880, when Mrs Haworth and himself made a tour up the Nile as far as the Second Cataract. To prepare themselves for this tour, they had read Miss Amelia Edwards' fascinating book *A Thousand Miles up the Nile*, and a few years later began their close friendship with the gifted authoress. At her instigation Mr Haworth bought and presented to the British Museum the chair, chessboard and chessmen that had belonged to Queen Hatshepsut. From 1887 dates Mr Haworth's intimacy with Professor Petrie, to whose epoch-making excavations he was for nine years a large subscriber. In 1891 he became a subscriber to the Egypt Exploration Fund, which he also assisted by large and generous donations from time to time. In 1912, he gave a large donation to the Manchester Museum for building purposes and helped to found the Egyptian collection at this Museum by presenting the share of the Egyptian antiquities which he had received in return for his support of Prof. Petrie's excavations. This Museum has benefited further by a gift of £10,000 in 1919 and another of £30,000 bequeathed to the same Institution under the terms of his will. In 1913, Mr Haworth received from Manchester University the degree of Doctor of Laws in recognition of his services to the cause of learning.

Professor Rostovtzeff communicates the sad news that Boris Turaeff, weakened by starvation, died in Petrograd in the spring or summer of 1920. Born about 1870, Turaeff studied first in Petrograd and later under Professor Erman in Berlin. After his return to Russia, he was appointed Professor of Ancient History (Classical East) in the University of Petrograd, and when the Golénischeff collection was purchased by the State, was made Keeper of the Egyptian collection in the Museum of Classical Art in Moscow. In 1918 he was elected a member of the Russian Academy of Sciences. A devout member of the Russian Orthodox Church and a specialist in its history, Turaeff sat in the representative Council for electing the Patriarch and for considering the introduction of reforms. His large private collection of Egyptian antiquities he intended to bequeath to the Moscow Museum. Contributions from his pen are printed in the *Journal* for 1917 and 1918.

At the sale of antiquities at Sotheby's on Dec. 6—7 last there was not much of interest from the strictly Egyptological point of view. The most important object from Egypt was the Moir Bryce ivory diptych (240), of the VIIth century A.D., containing intercessory prayers and commemorations of saints for the use of the deacon during the Anaphora of

the divine liturgy. Some account of this, which was acquired for the British Museum, has been given by Mr W. E. Crum in *Proc. Soc. Bibl. Arch.* xxx, 255—265, xxxi, 288. No. 241 in the sale-catalogue was an Eighteenth Dynasty stela of good workmanship belonging to the  "great one of the Gold Lands of Amān" (the word "Amān" is erased) named  "Minemhēt, son of  Nebseny." The father bore the same title, which is not mentioned in Professor Reisner's admirable account of the Viceroys of Ethiopia in *Journal*, vi. There it is shown (pp. 78—9) that the title "overseer (imy-r) of the Gold Lands of Amān" was borne by several viceroys from the reign of Amenophis III onwards; there is at present nothing to indicate whether the title on the stela was identical with the better-known title, whether it was that of an official subordinate to the Viceroy, or whether it referred to other gold-mines than those of Nubia, e.g. those in the desert of Coptos.

In reference to Professor Sayce's criticisms (*Journal*, vi, 296) of Dr Albright's article on Menes and Narām-Sîn, Mr Ernest S. Thomas writes from the Residency, Cairo, as follows: Professor Sayce in the last number of the *Journal* remarks "The Egyptians like the rest of the ancient Oriental world obtained their copper from Sinai, Cyprus, and the Taurus Mountains and not from Kush." And again, "The Egyptians derived their malachite from the Sinaitic Peninsula and not from Kush." I cannot be quite sure that Professor Sayce means to imply that there is no copper elsewhere in the neighbourhood of Egypt in workable quantities, and that there is no copper ore in Kush. At any rate it may be worth noting that copper ore (silicate) occurs extensively in the Wady 'Alâki, east of Ḳubbân at Abskiel, and this was worked in ancient times. The neighbourhood has not been thoroughly searched for indication of Ancient Egyptian work upon the beds, but they appear to have been exploited by the Arabs and Romans. It is hardly conceivable that the pioneer miners in the Wâdy 'Alâki should have neglected these sources of copper, especially as the hill slopes (so Mr A. H. Hooker states, who knows the Wâdy well) are dyed peacock blue with the ore. BREASTED, *Records*, iii, 274, refers to copper from the God's Land in a Ramesside inscription, but there is nothing to determine which of the many God's Lands is meant. The fact remains that there are no recorded references to copper as a tribute from Kush.

NOTICES OF RECENT PUBLICATIONS

The Life of the King of the South and North, Kamari'a, Daughter of the Sun Hatshepsut. A Pageant of Court Life in Old Egypt in the early XVIIIth Dynasty, Reconstructed from the Monuments. A Chapter in Egyptian History in Dramatic Form. By TERENCE GRAY. Cambridge: W. Heffer and Sons, Ltd., 1920. 8vo. pp. xxviii+200.

Any contribution to the history of a period as full of interest as it is of obscurity—the early Eighteenth Dynasty—is a welcome addition to our knowledge. We have such a contribution offered in the book now before us by Mr Terence Gray, and as his name has not been previously known in Egyptology, we must take him at his word and examine his work in the light of the claims he makes for it in the Introduction. He has cast the theme into the form of a drama, and as the whole purpose of the work is to visualise the individuality of a few personages, perhaps he could not have achieved his object in a better way.

It is manifestly not within our province in this *Journal* to criticise the dramatic or artistic merits of the work, but rather to see of what materials the author has availed himself and to what use he has put them. The Egyptologist is naturally averse from any popular trifling with his science, and not without good reason, for ancient Egypt has too often supplied the motive, the stage and the background for many ludicrous efforts by persons wholly ignorant of, and quite incapable of understanding, the real meaning of Egyptian archaeology, through lack of first-hand information. Mr Gray is wholly exempt from this stricture, for he has used his materials ably and well and admits that he has worked hard, although he does not tell us whether he has studied the language and based his drama upon his own interpretation of the texts, or whether he has used and digested the translations of others. If the former is the case he must be congratulated upon his results as having thoroughly entered into the spirit of the texts, but if the latter, whilst admitting that astute judgment has been manifested, we think that more precise acknowledgement is due to the scholars to whose researches he is indebted than the very scanty bibliography can convey. Be this as it may, the author, or his prompter, has adhered very closely to the sense and, as far as we Westerners can probe it, to the psychology of the texts, and has imparted a thoroughly Egyptian flavour to the whole production.

There is one point to which closer attention might have been paid, and that is nomenclature. The vexed question of the transcription of proper names has evolved various systems, but to none of them does the author consistently adhere. For the principal figure in the drama the old conventional spelling Hatshepsut is used, but side by side with this we have, to take a few instances, Tahutmosis, E'bina, Peraa, Osyri, R'fa, Yahmase, Yamoun and Yamounhotpu. We thus have a series of hybrids displaying a mixture of the Manethonian, Masperonian, old conventional, and modern usages. Moreover, there is no warrant whatever for a prothetic Y in the name of Amün and its compounds, as the Cuneiform, Coptic and Greek equivalents show. The author is of course free to follow whatever system he pleases, but whilst he has wisely eschewed such barbarities as Thothmes and Amenhetep, he has introduced novelties quite as disconcerting. He might with profit have consulted the chapter on proper names contributed by Dr Gardiner to the *Topographical Catalogue of the Private Tombs of Thebes*.

The historical facts as to the mutual relationships of the three Tuthmosides and the great queen, as far as we can gather them, are ingeniously worked out, although the now usually accepted interpretation, as formulated by Prof. Breasted in his *History*, is rejected. We cannot help thinking that the author has not allowed sufficiently for the fact that we have no intimate biography of the queen to guide us, but only inscriptions couched in the pompous and time-honoured terms whereby each succeeding Pharaoh sought to convey to posterity that he was the greatest of all kings and the most virtuous of men. Hatshepsut was no more modest than her peers, and whilst we have abundant evidence that her reign was a remarkable one, it is difficult at times to avoid the conclusion that this was due, not so much to the queen's own powers as to her ability, like William I of Germany, to surround herself with capable men. We cannot help thinking, too, that the character of Tuthmosis III as Mr Gray presents it, is somewhat belied by what we know of his later career.

The general movement of the story is sustained and accurate and the author has paid great attention to the setting and has cleverly introduced much contemporary custom and literature. Thus the love songs of the Harris Papyrus are sung to the queen by the harper, the story of the Shipwrecked Sailor is read to the little princess to wile away the tedium of a long sail on the river, and elsewhere the wise saws of Ptahhotpe are appropriately quoted—and ridiculed.

Mr Gray's drama, if not contributing anything new to our knowledge of the period, has at least the merit of presenting us with a synopsis of the principal characters of the time in a novel form, which cannot but stimulate independent enquiry by those who are sufficiently interested to work the subject out for themselves. Moreover, this book is an indication that Egyptology has gained as an accession to her ranks a new and enthusiastic devotee, who has shown his capability to do thorough work.

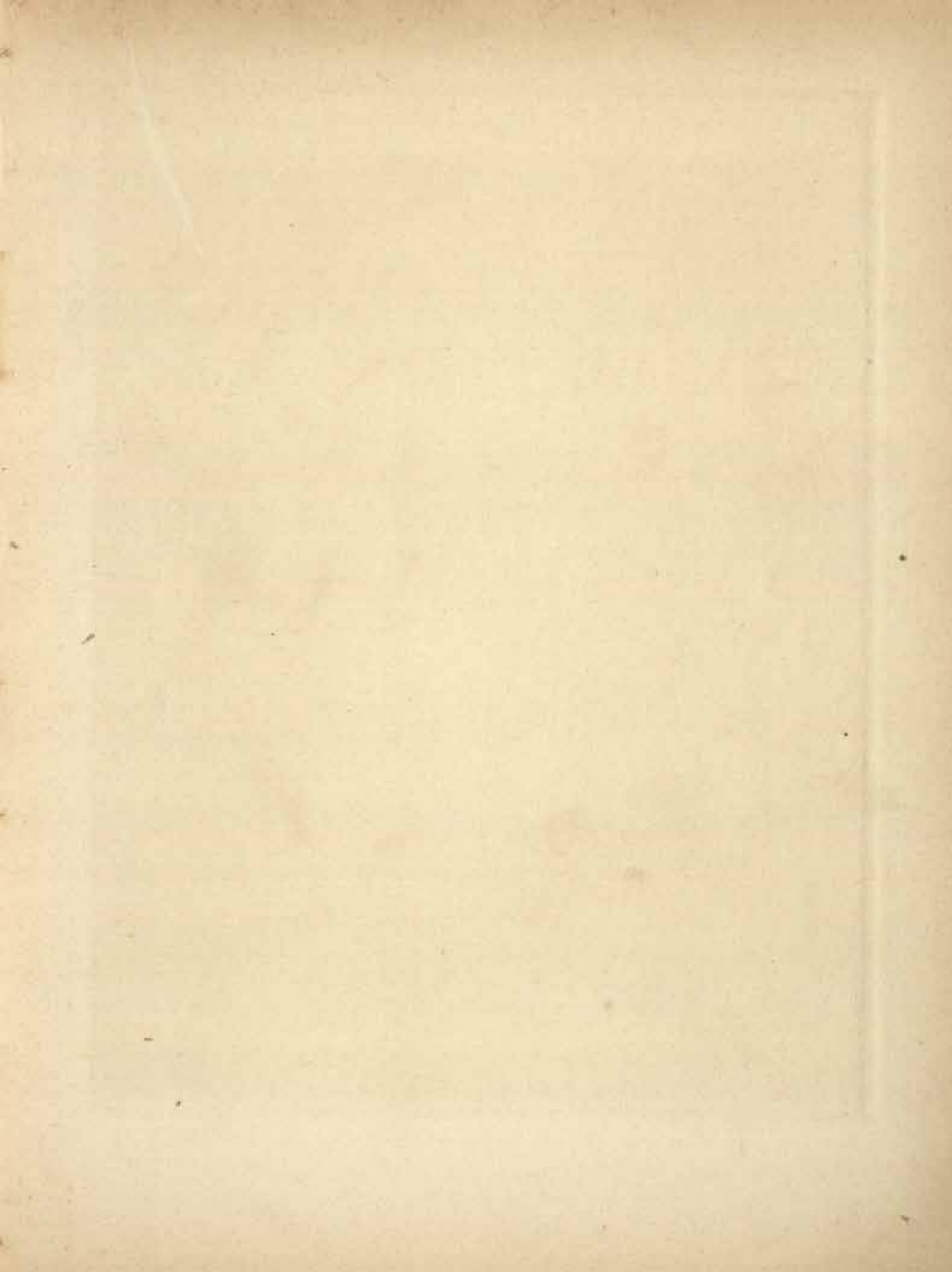
WARREN R. DAWSON.

Juristische Papyri: Erklärung von Urkunden zur Einführung in die Juristische Papyrskunde. By PAUL M. MEYER. Berlin: Weidmann, 1920. Pp. xx+380.

The sub-title of this excellent work well expresses its nature and object. Whereas Mitteis in his portion of his and Wilcken's *Grundzüge und Chrestomathie der Papyrskunde* sketched the whole field of legal practice in Græco-Roman Egypt in one part, while collecting the illustrative texts, with brief introductions and commentaries, in another, Meyer gives a summary conspectus of the subject in which are incorporated, as occasion demands, the texts used to illustrate his points. The object of the volume is, as he explains in his preface, to introduce to the juristic side of papyrology both jurists unacquainted with the papyri and the general student of history or philology. He has endeavoured, so far as practicable, to include texts not given by Mitteis; and he has been helped in this by the fact that several papyri of great legal importance have been published since the appearance of the *Papyrskunde*. Thus, out of the 96 texts contained in the volume 50 are not to be found in Mitteis; one, no. 48, is here published for the first time except for the first 15 lines, which were quoted by Jörs in a recent article.

The importance of this publication, by a scholar of Meyer's reputation, hardly needs emphasizing. Like all Meyer's editions it is distinguished by its wealth of bibliographical references, and by the care and thoroughness of the editorial work. It is not a large volume, and the introductions and commentaries to the various texts are comparatively brief, but a vast amount of instruction has been packed into a small space. The references to parallel documents and to juristic and papyrological literature will enable the student readily to acquaint himself, in more detail than the scope of this work allows, with any particular subject; and the volume is therefore admirably adapted to serve its purpose as an introduction. The arrangement of the work, which is divided into six main sections, themselves further subdivided, is a good one, and facilitates handy reference; and particularly useful features are the author's practice of indicating, in the introduction to each document, the various parts of which it is composed, and his frequent rendering of Greek words and phrases into the corresponding Latin terms, of which the Greek is often a translation. Naturally his explanations of certain disputed points will not be accepted by all, and there are matters of detail on which he is open to criticism; but his work is an extremely useful guide to the subject and will be found invaluable by editors and students of legal documents from Egypt. He was fortunately able to include in an appendix a complete text, with a brief but valuable commentary, of the Berlin *Gnomon* of the *Idios Logos*. To the thanks which papyrologists owe him must be added congratulations on the completion of such an undertaking amid the difficulties of the present time.

H. I. BELL.





STATUETTE. I 1575 OF THE LOUVRE COLLECTION

ON TWO STATUETTES IN THE LOUVRE MUSEUM

By CHARLES BOREUX¹

THE two wooden statuettes in the Louvre Museum—Nos. I 1575 and I 854—reproduced in Plates XIX—XX belong to a class of monuments to which Maspero long ago drew attention², and of which the essential characteristic is a long staff; at the top of this staff is usually an animal's head, and the person represented either holds it before him with both hands, or clasps it along his body. One of these two has already been published³, and of the other statuettes of the same type the only ones that have been published up to the present are statuettes Nos. D 18, D 19 and D 43 of the Leyden Museum⁴ and statuettes Nos. 3047 and 3048 of the Turin Museum⁵; the other specimens conserved in the latter museum are known only by summary mentions in catalogues⁶ and by Maspero's description of one of them⁷.

Statuette No. I 1575 (Plate XIX)⁸ is a work of striking delicacy and charm, in the elegant and supple style which characterises the best pieces of the Eighteenth and Nineteenth Dynasties⁹; the elongated oval of the face, the long and boldly rendered nose, the sensitive mouth, the lips of which seem to be slightly parted, all give to the face a character of somewhat melancholy grace which assorts in most harmonious fashion with the slender proportions of the body and the nobility of the pose. Statuette No. I 854 (Plate XX)¹⁰—apart from the qualities of modelling shown by certain parts such as the breast¹¹ and belly—is chiefly commendable for the solidity of a technique which can be reproached for at most a little heaviness. Neither piece is inscribed; nevertheless the comparison that they invite with the similar inscribed statues of Leyden and Turin leaves

¹ This article has been translated for the *Journal* by Mr Battiscombe Gunn.—Ed.

² *Rec. de Trav.*, II, 175–7, 185; III, 104.

³ RAYET, *Monuments de l'Art Antique*, I (*Statuettes en bois provenant de Thèbes*).

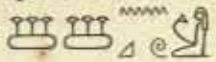
⁴ CAPART, *Recueil de Monum. Égypt.*, 2^e série, Pls. LXXX—LXXXII; Statuettes D 18 and D 19 had previously been published, in the form of drawings, by Leemans (*Aegyptische Monumenten...*, Part II, Pls. III and IV) and described by Maspero (in *Rec. de Trav.*, III, 104).

⁵ PETRIE, *Photographs*, Nos. 278–280 (= ORCUTTI, II, 91, No. 3, and 92, No. 14; FABRETTI-ROSSI-LANZONE, *Reg. Museo di Torino*, 415–6; MASPERO, in *Rec. de Trav.*, II, 175–6).

⁶ ORCUTTI, II, 91, No. 4, and 92, Nos. 15 and 16 (= FABRETTI, Nos. 3046, 3049 and 3050).

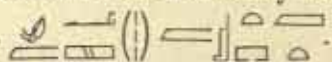
⁷ *Rec. de Trav.*, II, 185 (No. 3046 of FABRETTI).

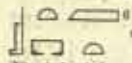
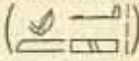
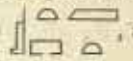

⁸ Acquired by the Louvre in 1826 with the Salt Collection (No. 538 of the catalogue of that collection). Light wood, formerly painted. Height (including stand), .425 m. Height of the head to the level of the shoulders, .068 m. Breadth (from shoulder to shoulder), .104 m. Dimensions of the stand: length, .2 m.; width, .085 m.; height, .048 m.

⁹ It may be compared with the brecoia statuette usurped in the Twenty-second Dynasty by the First Prophet of Amūn  (cf. LEGRAIN, *Statues et Statuettes de Rois et de Particuliers*, No. 42194).

¹⁰ No. 539 of the Salt Collection catalogue. Light wood, formerly painted. Height (including stand), .345 m. Height of head, .064 m.; breadth (from shoulder to shoulder), .1 m. Dimensions of stand: length, .155 m.; width, .095 m.; height, .05 m.

¹¹ The salience of this is rendered merely by the modelling of the pectoral muscles; in Statuette No. I 1575 it is accentuated by the conventional three incised lines.

no doubt that we here have to do with two of those persons who are habitually designated in the inscriptions by the name of *sdm-š(w) m ist mšct*, .

The monuments upon which these persons are thus styled—stone and wooden statues, stelae, shawabtis, etc.¹—all come from a group of burials situated close to Dêr el-Medîneh and Drâc Abu-'n-Naga², that is to say from the vicinity of the burial-ground of the Theban kings of the Middle and New Kingdoms. As, in the occasional reliefs in which the *sdm-š(w)* are represented exercising their functions³, they are shown in adoration before a series of kings, at the head of whom regularly stands Amenophis I, and all of whom "were buried or at least had their tomb-chapels in the neighbourhood of the latter king's tomb⁴," Maspero⁵ saw in these functionaries members of a confraternity attached, in the Eighteenth and Nineteenth Dynasties, to a particular region of the Theban Necropolis which was called , and which arose round the tomb of Amenophis I, between Kurneh and Drâc Abu-'n-Naga⁷. In this capacity the *sdm-š(w)* are supposed to have taken part in the care of that tomb, as well as of the tomb of a certain number of kings, queens and princes who were buried near by, and who were the objects of a common worship⁸. Further, in the hierarchy of the functionaries entrusted with this cult they occupied, according to Maspero, the lowest grade; they were the *servants* () of the , and as such ranked immediately below the priests, .

As a matter of fact their costume and the style of their wigs¹⁰ accord but ill with such a lowly station. The two *sdm-š(w)* of the Louvre are dressed in the long pleated kilt with triangular apron, rising behind almost to the shoulder-blades, and knotted round the waist a little below the navel; their wig is the heavy wig hiding the upper part of the ears¹¹, its tresses coming down in front¹² on either side of the neck and falling on the breast at the level of the collarbones. Now this kilt and wig are those that are seen worn, in the New Kingdom, by priestly functionaries of the highest rank, particularly by the First Prophets of Amûn¹³, some of whom were royal personages¹⁴. It is true that these latter usually also wear a tunic with wide sleeves¹⁵; but one of the *sdm-š(w)* at Leyden is dressed in this very same tunic¹⁶. To repeat, these persons hardly suggest, in respect at least to the details of their dress, the idea of subordinate employees¹⁷.

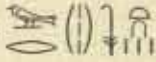
¹ A list of these—stopping short at the year 1882—was made by Maspero in his *Rapport sur une Mission en Italie* (*Rec. de Trav.*, II, 159-99; III, 103-4).

² *Op. cit.*, II, 159.

³ LEPS., *Denkm.*, III, 2, b and c, and 173, b and c (tombs Nos. 11 and 9 of Dêr el-Medîneh).

⁴ MASPERO in *op. cit.*, III, 112.

⁵ *Loc. cit.*

⁶ Persons having functions connected with the *ist-mšct* were at one time considered to have been judges who played during the Theban period the same part as the  in the Old Kingdom; Maspero rightly disposed of this view in *Rec. de Trav.*, II, 160.

⁷ *Op. cit.*, II, 166.

⁸ *Op. cit.*, III, 112.

⁹ *Op. cit.*, III, 108.

¹⁰ *Op. cit.*, III, 111 (and figs. 1-5).

¹¹ It may be mentioned that these are pierced.

¹² They terminated at the back in "bunches rounded against the neck" (MASPERO in *op. cit.*, III, 111 and fig. 3).

¹³ Cf. LEGRAIN, *Statues et Statuettes*, No. 42156.

¹⁴ *Op. cit.*, No. 42158.


¹⁵ *Op. cit.*, Nos. 42157 to 42159, 42161, 42163.

¹⁶ CAPART, *op. cit.*, Pl. LXXXII.

¹⁷ It was for this reason, no doubt, that Maspero thought (in *op. cit.*, III, 111) that their statues show them in their ceremonial costumes, and also that although their title "emphasised their humble estate



STATUETTE 1 854 OF THE LOUVRE COLLECTION

Neither is this idea suggested by the characteristic emblem that they hold in their hands. In statue I 1575 this emblem—which the figure holds before it with both hands—is composed of a semi-cylindrical¹ staff terminated above by an aegis with a ram's head bearing the disk²; in statue I 854 the staff—here held with one hand along the body like a weapon—has the form of a round stock at the top of which is an abacus surmounted by a falcon's head. Such variants of this traditional type as are to be found do not appreciably modify it. For example the staff of statue D 18 at Leyden, extremely short and thin, is terminated by a lotus-flower supporting the abacus, on which are set, in as many successive stages, the aegis, the ram's head and the disk³; while  in the Turin Museum, has a staff in each hand⁴, and while again the staff, usually held in the left hand⁵, is in some cases held in the right⁶. Notwithstanding these slight divergences it is clear that the elements composing the badge of office of the *sdm-š(w)* are essentially a support and a divine symbol, the latter chiefly taking the form, in the examples at present known, of the head of the ram of Amūn⁷, or of that of the falcon of Horus⁸, sometimes also of the image of Amūn or Ptah⁹. These standard-staves may be, if not identified, at least compared with those stands and small chests supporting the emblem of a god which so many statues of the Theban period show us in the hands of kneeling or squatting suppliants¹⁰; the comparison is the more cogent from the fact that this emblem is usually, just like the badge of the


contrasted with the deified ancestors at whose expense they lived..., they were really considerable personages, well-to-do, educated, and looked up to in their section of the city" (*Histoire Ancienne*, II, 526. Cf. CAPART, *loc. cit.*).


¹ It was apparently because it is thus held that the carver cut away its hinder surface in order to fit it better against the statue. This hinder surface is pierced with mortises to which corresponded tenons—one of which is still *in situ*—fixing the standard to the apron. Another cutting, of elbow form, made in the lower part of the staff, allowed the latter to be removed at will, or on the other hand to be fitted more firmly by fixing it under the apron.

² The details of the aegis are painted in green, also the ram's wig; the beard and horns of the ram (the end of the right horn is broken off) are painted black; the disk appears to have been painted red.


³ CAPART, *op. cit.*, Pl. LXXX. The figure holds this staff in front of him; on the other hand the staves of figures D 19 and D 43—which are held at the side—support the divine symbol without any intermediate platform (the symbol has disappeared in statue D 43).


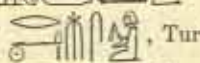
⁴ MASPERO in *op. cit.*, II, 176.

⁵ Statues I 854 in the Louvre, D 19 and D 43 at Leyden; statue of  at Turin (MASPERO in *op. cit.*, II, 185).

⁶ Statue of  at Turin (MASPERO in *op. cit.*, II, 175).

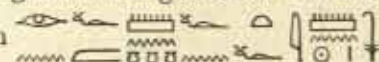
⁷ The most usual case (Statues I 1575 Louvre, D 18 and 19 Leyden).

⁸ Statue I 854, Louvre; statue of  Turin.

⁹ Statues of  and of  Turin. The staff of Cairo Statue No. 42194 terminates with the head of a goddess (Hathor ?) bearing disk and horns.

¹⁰ Cf. LEGRAIN, *Statues et Statuettes*, Nos. 42143 and 42156 (Nineteenth-Dynasty), 42161 (Twentieth Dynasty; the suppliant is here standing) and 42214 (statue of the Nineteenth Dynasty re-used in the Twenty-second? cf. the style of the wig); in some examples the divine emblem is placed before the suppliant and rests on no support (LEGRAIN, *op. cit.*, Nos. 42172, 42180). For the rest, these supports do not appear to connect with the same ideas as those attached to the standards. VON BISSING, *Denkmäler ägypt. Sculptur*, 55, is disposed to see in them "the sacred chest of the Amen-Ré of the Underworld, or something approximating to this."

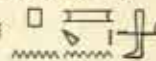

sdm-ḥ(w), a ram's head bearing the disk¹. Here again the persons who hold such stands before them have often the rank of First Prophets of Amūn², and some of them are even kings³; it thus seems very difficult not to admit that the *sdm-ḥ(w)*—who themselves are sometimes seen holding out this very same support with ram's head⁴—were priests of quite high rank.

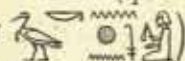
And there is further and more direct evidence in support of this view. Although it is not known that the First Prophets of Amūn ever bore the title of *sdm-ḥ(w)*, they may nevertheless have occasionally performed the duties of these latter, since some of them are expressly represented holding in their hands the standard-staff⁵. Further, kings could also perform them, as is shown by a representation in the Temple of Sethos I at Abydos⁶; this fact is further proved by the colossi of Sethos II conserved at the Louvre and at Turin⁷, and also by three statues from the Karnak *cache*, one of which appears to represent Hareḥab⁸, the other two being of Ramesses III⁹. In these last the king holds along his left arm the staff of the *sdm-ḥ(w)*¹⁰; it even appears, from the inscription  engraved on one of these staves¹¹, that the latter must have constituted the special instruments of a clearly defined act.

¹ LEGRAIN, *op. cit.*, Nos. 42143, 42161, 42172 and 42180. The emblem of Statues Nos. 42156 and 42214 is a ram's head without disk.

² LEGRAIN, *op. cit.*, Nos. 42156, 42161.

³ LEGRAIN, *op. cit.*, No. 42143; cf. also VON BISSING, *loc. cit.* (Sethos II).

⁴ Cf., for example, the Turin Museum statue of the *sdm-ḥ*  (MASPERO in *Rec. de Trav.*, II, 177); the stela, at the same museum, of another *sdm-ḥ* named  shows us the latter adoring a ram standing on a shrine (*op. cit.*, 174).

⁵ LEGRAIN, *op. cit.*, No. 42160 (statue of ) from the Karnak *cache*; it is worthy of note that this same *cache* yielded another statue bearing the name of the same person in which the figure holds before him a shrine surmounted by a ram's head with disk (No. 42161). Statue No. 42194 cannot be cited in this connection, the First Prophet of Amūn whose name it bears having usurped it in the Twenty-second Dynasty. Besides the First Prophets of Amūn, scribes holding the standard staff are sometimes found (LEGRAIN, *op. cit.*, No. 42168; cf. also MASPERO in *Rec. de Trav.*, IV, 147).

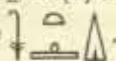
⁶ MARIETTE, *Abydos*, I, 71 (=CAPART, *Le Temple de Seti I^{er}*, Pl. XXIII); in this representation the king holds before him at arm's length a standard having the ram's head with disk. Judging by what can be made out, in Capart's reproduction, of the legend over the scene, the meaning of the latter is unfortunately not explained thereby.

⁷ On these colossi see VON BISSING, *Denkmäler ägypt. Sculptur*, 54. The object which the Louvre statue holds in its right hand, and which has been only roughed out, is extremely puzzling (*loc. cit.*).


⁸ LEGRAIN, *op. cit.*, No. 42095.

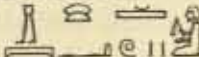
⁹ *Op. cit.*, Nos. 42149, 42150 (colossus and statue of Ramesses III). Cf. also the Ramesses II holding two standards at the Cairo Museum (MASPERO, *Guide to the Cairo Museum*, 1908, p. 176, No. 513).

¹⁰ Sethos II and Ramesses III hold it in the usual manner; Hareḥab (?) holds it, however, with his right arm folded transversely across his breast. The upper part of the standard is missing in No. 42095; in Nos. 42149 and 42150 it is an aegis with ram's head without disk. It has been arbitrarily restored in the Louvre statue of Sethos II; in the Turin one it is entirely destroyed.

¹¹ No. 42149. The staves of the colossi of Sethos II and those of Statues Nos. 42095, 42150 at Cairo bear only the royal titulary; in the statues of *sdm-ḥ(w)* expressly stated to be such, the staff reproduces, when it is inscribed, the ordinary formula of the .

Is it possible to determine this act, and thus to define the exact part played by the *sdm-ḥ(w)*? I have already said that the monuments which show us the latter fulfilling their duties are rare; unfortunately they are also somewhat obscure. At Dér el-Medineh

 makes offering to Amenophis I followed by a series of kings and queens¹,

and , before burning incense in front of this same Amenophis I and various

royal persons, has assumed the panther-skin². Another *sdm-ḥ* has in like manner vested himself in it to offer incense and libation to three deified kings³; another presents two censers to the image of Amenophis I carried upon a throne⁴. These indications, all that are notable, are valuable in that they confirm the importance of the office held by the *sdm-ḥ(w)*, but they are at the same time too general to throw much light upon the real character of this office itself. A study of the standards appears to be much more instructive in this respect. It makes it clear, in fact, that the standards of the *sdm-ḥ(w)* are sharply distinguished, both by the symbols which surmount them and by the form of the supports on which these symbols are set, from the standards that are seen carried in the processions of the *sed*-feast, for example, or of various other religious feasts represented on the temple walls⁵. On the contrary, these very symbols forming the upper part of the standards borne by the *sdm-ḥ(w)* reproduce more or less exactly the upper part of the aegises set up at each end of the sacred bark on which was placed the shrine containing the image of the god or deified king. Thus, all the emblems of the *sdm-ḥ(w)* at the Louvre, at Leyden and at Turin are found at the prow and poop of some of the divine barks depicted in the seven chapels of the Temple of Sethos I at Abydos⁶; and if the aegises of these barks—or those of the barks adored in other sanctuaries—are not, *per contra*, all found among the standards of *sdm-ḥ(w)*-functionaries that are known to us at present⁷, the reason is doubtless merely that the known examples of these latter standards are not sufficiently numerous. However this may be, the analogy is most striking; the parallelism even goes so far, as regards the ram's head at all events, that the latter, in the Temple of Sethos I, emerges from a lotus-flower at the front and back of the bark of Amūn, exactly as in the upper part of the standard of one of the Leyden *sdm-ḥ(w)*⁸. Aegises and standards thus offer us not only the same


¹ LEPS., *Denkm.*, III, 173 c.


² *Op. cit.*, III, 2 d.

³ *Op. cit.*, III, 173 b.

⁴ *Op. cit.*, 2 b. Cf. also LEGRAIN in *Annales du Serv.*, IX, 57.

⁵ Cf., for example, the processions represented at Soléb (LEPS., *Denkm.*, III, 85-6) and at Medinet Habu (CHAMPOLLION, *Monuments*, Pl. CCXIV^{bis}, CCXIV^{ter}); cf. also, for the later periods, NAVILLE, *Festival Hall*, Pl. II; MARIETTE, *Denderah*, I, Pl. 38; IV, Pls. 3-4, 12-14; BÉNÉDITE, *Philae*, I, Pls. XXXIX and XLI, etc.

⁶ MARIETTE, *Abydos*, I, 63-4, 70-1. In these barks are to be observed the ram's head (Chapel of Amūn), the falcon's head (Chapel of Horus), and the head of a goddess bearing the disk and horns (Chapel of Isis); although we do not there find the statuettes of Amūn and Ptah, seated, which top the two standards of  at Turin (PETRIE, *Photographs*, Nos. 278-9), both these gods are nevertheless represented on the aegises at Abydos, the former by the already mentioned ram's head, the

latter by two soul-birds perched upon a . Cf. also the standards of *sdm-ḥ(w)* with aegises of sacred barks shown LEPS., *Denkm.*, III, 14, 138, 150, 180-1; CHAMPOLLION, *Monuments*, Pls. XLII, CL^{bis}; GAYET, *Louxor*, Pls. XLI-XLIII; CHASSINAT, *Edfou*, I, Pl. XIV, etc.

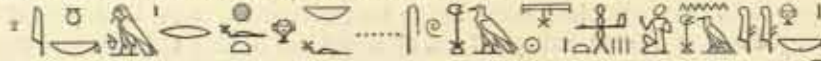


We do not find, for example, in the standards the symbol of Ḥarakhte (MARIETTE, *Abydos*, I, 64): the lioness-head of Mehit (CHASSINAT, *Edfou*, I, Pl. XXXc), etc.

⁸ MARIETTE, *Abydos*, I, 63; CAPART, *Recueil de Monuments* (2^e série), Pl. LXXX.

types of emblems but even the same varieties of these types, and they must therefore have very closely related meanings; and since the heads of a ram, of a falcon, of Hathor, etc., when surmounting the aegises of barks, appear only in the most withdrawn part of the temple, where they protect, by their magic virtue, the mysterious adytum in the depths of which the majesty of the god is hidden, it is legitimate to believe that when they surmounted standards they played an analogous part, that is to say that the standards were also in some way connected with the service of the Holy of Holies. In other words, it seems that between the Eighteenth and Twentieth Dynasties there existed in certain Egyptian temples, independently of the processional standards of the usual type, other standards—copied after the pattern of the aegises of the sacred barks—which did not figure in the processions, but which doubtless stood fixed in front of the entrance of the sanctuary in order to protect from without the approach to this latter, just as the aegises inside protected the approach to the shrine proper. It is this second category of standards that appears to have been entrusted to the *sdm-ḥ(w)*, a veritable guard of honour of the god's house, a kind of chamberlains who did not indeed enter the sanctuary, since that privilege was reserved for the king and the high-priest¹, but who, nevertheless, approached it sufficiently closely to be able to boast of being "a soul face-to-face with his master," and of "passing the night in the shadow (?) of his face²." It certainly seems that such expressions give us a glimpse of the nature of their principal function³.

We know, further, through at least two representations, that the characteristic standards of the *sdm-ḥ(w)* were sometimes carried right into the sanctuary itself, where their protective action doubtless reinforced that of the aegises. One of these representations, already mentioned above, is in the Temple of Sethos I at Abydos, and shows the king, behind the sacred bark of Amūn, holding a ram-headed standard with both hands⁴. The other representation occurs at the Temple of the Wādī-es-Sebūā. On the walls of the "cella" of this temple, consecrated jointly to Amūn, to Ḥarakhte and to Ramesses II, the last-named is shown before and behind the two barks of Amūn and of Ḥarakhte, which are decorated with aegises having ram's and falcon's heads respectively⁵. In the former case he presents the offering to these barks; in the latter he raises behind their shrines an immense flabellum, and on this occasion he is followed by three standard-staves which terminated one in a ram's head, the next in a falcon's head, the third in a king's (?) head⁶, thus

¹ The statues to which the *sdm-ḥ(w)* are seen offering incense and libation in the tombs of Dér el-Medīneh (cf. last page, notes 1-4) are not the idols themselves, and the place in which they are to be thought as making these offerings is not the sanctuary; these scenes are of a purely commemorative character, and are doubtless not even to be located in a temple.



²  (Turin Stela of  cf. MASPERO in *Rec. de Trav.*, II, 194-5. On the meaning of the word  cf. BRUGSCH, *Wörterbuch*, 1024). To mark still further their attachment to the god or deified king whose sanctuary they guarded, the *sdm-ḥ(w)* often had the image of the god or king tattooed on their arms (MASPERO in *op. cit.*, III, 111, Statue D 19 at Leyden, etc.).

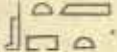
³ The *sdm-ḥ(w)* further seem in some cases to have exercised actual priestly functions (cf. above, note 2).

⁴ MARIETTE, *Abydos*, I, 71 = CAPART, *Le Temple de Seti I^{er}*, Pl. XXIII (cf. p. 116 above, note 6).

⁵ LEPS., *Denkm.*, III, 180 (= GAUTHIER, *Le Temple de Ouadi es Sebouā*, Pl. LX, and pp. 203, 205-6).

⁶ This royal (?) head wears the double crown in one case, and in the other bears the disk and horns; it may thus alternatively have been the head of a goddess—Maut or Hathor.

reproducing the aegises of the barks of the three divinities adored in the temple¹, in exactly the same fashion as the standards of the *sdm-š(w)* may have done. It is very probably these standards, then, that are represented here, and the scene may be merely a variant of the one at Abydos. That the three standards are held in this case only by animated  and  symbols is doubtless because the *sdm-š(w)*, unlike the king, could not enter the sanctuary in person².

The *sdm-š(w)* performed their duties in a place which the texts invariably designate by the term . It is at first sight tempting to see in this name one of the appellations of the sanctuary, the place where the king made the offering of Mā'et to the god, and which might for this reason have been called the "abode" of this goddess. As a matter of fact this meaning would not apply at all very well here, since access to the sanctuary was just what was forbidden to the *sdm-š(w)*; moreover, one of the most convincing parts of Maspero's argumentation is certainly that in which he establishes that the *ist-mš't* was that region of the Theban Necropolis which extended from Drā' Abu-'n-Naga to Kurneh³. He demonstrates also that this region is found mentioned only between the reigns of Amenophis I and Amenophis II and between those of Ramesses I and Ramesses IV⁴, and he concludes from this, as we have seen, that the quite fortuitous collocation of the tombs of these various kings had as a consequence, in the period of the Eighteenth to Twentieth Dynasties, the creation of a confraternity charged with the care of these tombs, a confraternity of which the *sdm-š(w)* were the lowest members⁵. That there was indeed in this period a body of functionaries specially attached to the *ist-mš't* is not open to doubt, since the inscriptions give us a whole series of titles connected as much with the maintenance and administration of this part of the Necropolis as with the funerary cults which were there celebrated⁶. Nevertheless it is not possible to say whether the whole of these functionaries, or the *sdm-š(w)* alone, were constituted as a confraternity in the proper sense of the word, or even if any of them had ever formed confraternities of this kind⁷. Their titles, moreover, apply quite as well to funerary temples as to tombs, and some of them

¹ It is doubtless on account of the cult of deified kings that certain *sdm-š(w)*, e.g., the  of statue I, 852 at the Louvre, style themselves . It may be mentioned that this *Nfr-rnpt*, who is standing with both arms hanging at his sides, carries no standard.

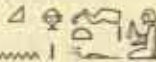
² It is a question whether they are not here represented by the figures which stand in front of each standard on a support fixed to the upper part of this, just below the aegis (cf. LEPS., *Denkm.*, III, 180); in view of the place occupied by the standards it is however more probable that these figures are so many representations of the king himself, whom the standards protect as they protect the god. It is not possible to verify this point in Gauthier's reproduction.


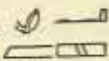


³ *Rec. de Trav.*, II, 163-6.

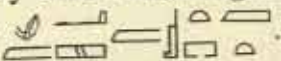
⁴ *Op. cit.*, II, 166.




⁵ Cf. p. 114 above. This fraternity was supposed to have been analogous "to that of the people who later, in the Greek Period, contracted with families to make annually, on certain days, the offerings and consecrated prayers in honour of such and such a deceased person" (MASPERO in *op. cit.*, II, 160).

⁶ *Rec. de Trav.*, II, 160, III, 107-8.

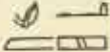

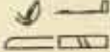

⁷ It is impossible to gain any information on this point from the text of the stela of  (cf. note 2, last page); despite the apparently precise details which it gives regarding the functions of the *sdm-š(w)*, this text is as a whole extremely obscure.

apply a good deal better, so that the *ist-m³t* appears in the last analysis to have been the region occupied not by the tombs of the kings of the Eighteenth to Twentieth Dynasties mentioned above—the majority of these tombs, for the rest, have been found in the Bibân el-Mulûk—but by the funerary temples of these same kings, temples which we know, as regards those of Amenophis I and Sethos I, at all events, to have actually stood in the neighbourhood of Kurneh. It is precisely the nature of the functions exercised by the *sdm-š(w)* that forms the strongest argument in favour of such an interpretation; the characteristic emblem of the most important of these functions proves that these latter could have been exercised only in a temple. And as they were seemingly always exercised at the entrance of the sanctuary itself, it is evident that the *sdm-š(w)* must have been—as the costume in which they are habitually represented has already disposed us to believe—priests of considerable rank. It seems clear that their title, and probably their office also¹, is peculiar to the *ist-m³t*, and that like the latter it is no longer met with after the Twentieth Dynasty. In any case we must not be misled by the humble appearance of this title. Although the meaning “servant,” “domestic,” is assured to the phrase  by indubitable examples², the  of a god³ were no ordinary domestics, and we must doubtless take the title in this connection in a sense, if not quite similar, at all events somewhat analogous to that in which the kings reigning over Upper Egypt during the pre-Menite period took the word  when they styled themselves  that is to say “Servants of Horus.”

POSTSCRIPT. The war, in consequence of which it is possible only gradually to put oneself in touch with the Egyptological work published during the past few years, is the cause of my not becoming acquainted, before concluding the above article, with the very interesting study published by Monsieur H. Gauthier in the *Bulletin de l'Institut Français d'Archéologie Orientale*, XIII, 153—168, entitled *La Nécropole de Thèbes et son Personnel*. Neither the conclusions of the author, nor the list which he gives, following Baillet, of the various kinds of *sdm-š(w)*, appear to me to render necessary any modification of the theory offered above regarding the quite special category of *sdm-š(w)* which bore the title of .

¹ A scene in the temple of Denderah (MARIETTE, *Denderah*, I, Pls. 44–5) perhaps shows that at least the memory of the *sdm-š(w)* was still extant in the time of the last Ptolemies. In the “cella” in which the king burns incense before the barks of Isis-Hathor and Horus, the bark of the latter deity is accompanied by two  and a  holding standards; now the emblems surmounting these standards are the falcon of Horus, the double feathers of Amûn (variant, the winged scarab) and the royal white crown (variant, the mace ); that is to say, they depict the same protective symbols that are to be observed in the “cella” of the Wâdy es-Sebû'a.

² MASPERO in *Rec. de Trav.*, II, 161–2.

³ *Sdm-š(w)* are sometimes found expressly called  () or  () (MASPERO in *op. cit.*, II, 162).

THE FIRST APPEARANCE OF THE NEGROES IN HISTORY

By DR HERMANN JUNKER¹

ACCORDING to the popular conception Africa is the Black Continent, the domain of the Negroes, in which other races play only a quite subordinate part. Neither for the present time, however, nor as regards antiquity does this view correspond to the facts. It is truer to say in general terms that there are two great families which share possession, Negroes and Hamites; not that one half of Africa is exclusively inhabited by the one, the other half by the other, but rather that throughout the whole region Hamitic population varies with Nigritic. The modern distribution of languages in Africa shows Hamitic idioms, whether pure or vestigial, in the east between the Lower Nile and the Red Sea, the whole complex south of this down to and including German East Africa being dominated by them; in South Africa we find the Nama and Korana languages in German South-West Africa and its surroundings; in the west, parts of French West Africa, and in the north large tracts of Morocco, Algeria and Tunisia; to these must be added the Tuaregs in the Sahara².

Yet these linguistic areas represent only a part of the Hamitic domains. In not a few other cases we certainly have a Hamitic population which has lost its own language; I need only mention Egypt and other regions of northern Africa. Thus, throughout the whole continent we have a motley mixture of groups belonging to both races. In addition to this there is at many points a mingling of the races, as probably with the Bantu; in other cases we see a Negro population dominated by a Hamitic superstratum. In brief, all degrees of intermixture are to be found.

This state of affairs must be the result of many migrations and numerous conflicts with varying issues, which began in immemorial times and have continued, to a lesser extent, down to the modern period. Of all these events history knows very little. In the majority of cases it can but argue back from the nature of the results to the anterior stages, and this only for fairly recent epochs.

Now, that an attempt should be made to throw some light on the history of the Blacks from the Egyptological side needs no justification. For Egypt is a part of Africa, and has the oldest history accessible to us. Its soil has not only yielded us a great abundance of witnesses to all phases of its own development, but has also preserved in copious measure documents relating to the history of the neighbouring races. Especially the excavations of the last few decades have provided us with rich material which is of the highest interest particularly for the study of foreign peoples. No more need be recalled here than the

¹ A Lecture given at the Statutory Annual Meeting of the Vienna Academy of Sciences, 30th May, 1920. We are indebted to Dr Junker for permission to reproduce his important lecture in the pages of the *Journal*. The translation has been made by Mr Battiscombe Gunn.—Ed.

² See, for example, MEINHOF, *Die Sprache der Hamiten*, in *Abhandlungen des Hamburgischen Kolonial-instituts*, ix, Hamburg, 1920.

discovery of reliefs in which are represented Semites, both settled and nomadic, Libyans and southern peoples, from about the time of 3000 B.C., and further the numerous finds of vases from the Mediterranean civilizations, which latter in part depend for their chronology upon these very finds. Finally, there is no country in the whole world which can exhibit so much certain and dated craniological material as Egypt, from all periods of its four thousand years' history; and of this material a not inconsiderable proportion is contributed by foreign races.

In endeavouring to ascertain the date of the first appearance of the Negroes in history, we must not consider this achieved by, for instance, the dating of an isolated Negro skull from an Egyptian cemetery, since that might perhaps be some representative of the black races who had come by way of trade as a slave to Egypt, without the latter having been in any sort of contact with his country of origin. It is rather a question of ascertaining when the first meeting with communities of this race took place, whether in trade or in war, where we have to look for the seat of these Negroes, when they became neighbours of the Pharaonic kingdom, and so on.

A second important preliminary point has also to be settled, namely, what we should understand by a "Negro," what are the somatic characters of that race. The misunderstanding of this matter has given rise to various fallacies in the history of the Negroes. There has been too great a tendency to regard the darker coloration of the skin as the chief distinctive character, but it is not the most important or the most typical; for a similar strong pigmentation occurs among other peoples, and the degree of darkness is by no means constant within the Negro races themselves. The real characteristics are, however, not equally emphasized by all anthropologists; I here follow the views of Derry, von Luschan, Elliot Smith and Pöschl.

Let us begin with the characteristics of the Negro skull. It is long and narrow, and, seen from above, is elliptical; in general its height is greater than its breadth and it has a large facial base (Basi-alveolar length). The zygomatic arches are prominent (*Phanerozygy*), and project well forward in the face; the bony nasal aperture (*apertura piriformis*) is broad, about equal in height and width. Most typical is the so-called subnasal prognathism, the salience of the upper maxillary; the lips are thick and puffy, the integumental upper lip often shows a concave profile. The hair is woolly and is generally twisted together in small tufts, "peppercorns," between which the scalp is visible.

Noteworthy in the skeleton is the extent of the flexion in the lumbar part of the vertebral column and the accompanying marked inclination of the pelvis, so that the buttocks and thighs appear to be pushed backwards. Equally striking is the dolichoknemy, i.e., the great length of the bones of the calf as compared with the thigh bones; the femoro-tibial index is 84 in the Sudanese Negroes, in Europeans about 80. This proportion is often emphasized in life by the thinness of the calves, caused by the length of the muscles and the shortness of the Achillis Tendo.

In the oldest period of Egypt that is accessible to us, up to the beginning of the Old Kingdom, i.e., roughly from 5000 to 3600 B.C., we find no evidence whatsoever of Negroes in the vicinity of Egypt. We meet with them neither in tablets commemorating victories, in ceremonial palettes or rock-reliefs, not yet hinted at in any other way. It is true that

¹ Derry and Elliot Smith according to their work in the *Archaeological Survey of Nubia, Report II*, and in the various *Bulletins*; Luschan from his *Hamitische Typen* in Meinhof's work cited above; Pöschl from verbal communications.

with the prehistoric skeletons of Nag^c ed-Dêr in Upper Egypt Elliot Smith assumes 2% with negroidal traits, but it is practically certain that this state of things is to be explained otherwise than by immigration of Negroes dwelling near by. They certainly cannot have entered gradually from the south through Nubia; for in the cemetery of South Kubâniyeh, much further south, which has been excavated on behalf of our Academy, and which is of the same period, no negroid characters were observable in the skeletons¹. And, what is still more significant, still further south, in Nubia, neither pure nor hybrid Negroes appear during the prehistoric period, and even in the subsequent A-period down to the Second Dynasty skulls from which any admixture of Negro elements can be inferred are here quite isolated². It should be remembered that both in Nubia and at Nag^c ed-Dêr the appearance of somewhat negroid traits in isolated individuals is very far from implying any connection, whether direct or indirect, with full Negroes; this indicates merely an immigration of elements which possessed a strain of Negro blood. Should the existence of a pure Negro at Nag^c ed-Dêr really be demonstrated—and this has not yet been done convincingly³—he certainly arrived there by way of trade, and his tribe must have dwelt far away.

¹ See *Anthropologische Untersuchung der menschlichen Überreste aus den altägyptischen Gräberfeldern von El Kubanîeh*, in the *Denkschriften der Akademie der Wissenschaften in Wien, Mathematisch-naturwissenschaftliche Klasse*, 96 Band, Vienna, 1919, p. 45: "any considerable admixture of Negro elements in these is not demonstrable." An exception is pointed out *op. cit.*, p. 43: "It may further be noticed that in the whole material to hand only one skull of decidedly Negro type is to be found. It is the skull of South Group No. 36, which was not included in the tables owing to premature synostosis of the sagittal suture." This skull was found in Grave 22 l. 9. Prof. Pösch describes it as follows: "Root of the nose broad, and flat nasal bones, broad osseous nasal aperture, strong alveolar prognathism, low face, somewhat sloping forehead." Grave 22 l. 9 had been plundered; judging from its situation it belonged to the last representatives of the A-period. But Szombaty points out "that the skull exhibits quite a different state of preservation to that of its neighbours; these are much more desiccated by alkaline action (*ausgelangt*) and weathered, while the 'Negro'-skull is still greasy and appears to be of more recent date." As a matter of fact there are a number of early Muslim graves situated just in this district; see *El Kubanîeh-Süd* (*Denkschriften der Akademie der Wissenschaften in Wien*, 62, 3), pp. 210, 212, Pl. LIII; we may thus very well have to do with one of these later burials. The absence of the eastern *loculus* also occurs elsewhere, e.g., in 22 u. 1, and is to be attributed to the re-utilization of old shafts.

² This is to be inferred from the *Archaeological Survey of Nubia, Bulletin 6* (1910): ".....as we pointed out in the First Bulletin (p. 28) and have repeatedly confirmed since, the only change in the physical characters of the population [from the early dynastic period to the Old Kingdom] was due to a slight admixture with Negroes." I have examined the detailed descriptions contained in the above-mentioned report, Vol. II, and find no instance even of negroid traits from the Early and Middle Prehistoric Periods. No pure Negro has been pointed out in A-Group (late Predynastic to the First Dynasties). Only a small number of negroid characters are found; cf. *op. cit.*, p. 71, Grave 7:104, bodies of a woman and a man, "being the only members of the A-Group presenting any possible traces of Negro admixture" and even these are not sufficiently definite to permit of a more positive statement being made." Cf. also: 30:39, "Young Predynastic male...well-marked prognathism"; 40:57, ditto; 41:406, ditto; 45:403 A, "...Skull is of the Egyptian type. ...the nares are negroid," etc.; 45:485, "...slight prognathism"; 45:517 A, ditto. Thus in reality the two skulls of Grave 7:104 are the only ones in which any admixture of Negro blood is in question at all, since the rest may be explained as variations of the early Nubian type. Negro-hybrids would thus appear to be rarer in Nubia during the early period than in Egypt, and an infiltration of Negroes from the south cannot have taken place at that time; even a merely negroid race, to which the two per cent. of negroid skulls at Nag^c ed-Dêr is to be attributed, must have come by another route than through Nubia.

³ The occurrence of pure Negroes appears to be assumed by Elliot Smith in *The People of Egypt* in *Cairo Scientific Journal*, No. 30, 1909, p. 14: "Even in early predynastic times in Egypt we meet with

* The italics in the matter cited in this footnote and the next are due to Dr Junker.—TRANSL.

For the following period, styled the Old Kingdom (roughly from 3600 to 2700 B.C.), the state of affairs is generally assumed to have materially altered. It has become a *fable convenue* among historians, as also among many anthropologists, that in the meantime the Negroes had penetrated northward along the course of the Nile, and had peopled Nubia down to about the First Cataract. Among the authorities I may name Eduard Meyer, Breasted and Randall-MacIver¹. According to them the history of the Negroes began as far back as *circa* 3000 B.C., and we are able to follow the fortunes of their northernmost representatives from that time onwards uninterruptedly.

But this view can no longer be maintained; for it runs entirely counter to the facts.

Representations of Negroes are wholly absent in the Old Kingdom. In the reliefs which show us the conquered peoples, including those of the south, a Negro is nowhere to be perceived. It is true that the Sixth Dynasty representation of the monarch Pepinakht at Elephantine, which shows a dark brown colouring instead of the usual red-brown, has been invoked in this connection, but it has been overlooked that the picture does not possess the specific Negro characters. The abnormal colouring of the skin may point to a dark Nubian mother, for the Princes of Elephantine, on the southern frontier of Egypt, who led the expeditions into Nubia, perhaps did not disdain to marry the daughter of a chieftain of the south²; but it is more probable that the reddish colouring of the reliefs was the conventional tint which differed from the actual hue in the south of Egypt.

But the main argument is derived from the word *nhšyw*, which in later times not seldom accompanies the representations of Negroes, and which, it is considered, must also in the Old Kingdom have designated the blacks. But I have been able to demonstrate³ that the

occasional Negro-hybrids, or even pure Negroes: but it was not until near the time of the Pyramid-builders that any appreciable number of Negroes came north, and even then most of them come no further than Lower Nubia" (regarding the last statement see the preceding note). Cf., on the other hand, *ibid.*, p. 8, "Sporadic examples of *negroid individuals* do occur in these predynastic graves: but it is surprising that a population inhabiting the narrow ridge of habitable land joining the territories of the white and black peoples should include so few *hybrids*..... What I do maintain is.....that definite and unmistakable Negro characteristics of skull, bones or hair are so rare in the predynastic people that it is altogether unwarrantable and quite misleading to look upon the Negro as one of the constituent elements in this population."

In the *Archaeological Survey of Nubia, Report 1907-1908*, II, 34, he writes on the same question: "In the earliest known Predynastic series of remains (I refer to those from Nag' ed-Dér in Upper Egypt) two per cent. of the skeletons exhibit undoubted *negroid traits*... At the present time, therefore, we must confess that, except for sporadic cases of *hybridism with Negroes*, there is no appreciable Negro-element in the Predynastic Egyptian."

¹ See JUNKER, *Bericht über die Grabungen auf den Friedhöfen von El Kubanick-Nord, Denkschriften der Akademie der Wissenschaften, Phil.-hist. Klasse* 64. 3, p. 13; cf. also von Luschan in MEINHOF, *op. cit.*, p. 244, where he says of the Berberin: "They were originally dark Africans, and were always represented by the ancient Egyptians as such, as real 'Negroes.' In the course of intermixture with their Egyptian neighbours during several thousand years they have doubtless received some Hamitic blood.....," etc.

² The *Petrograd Papyrus* 1116 A, recto, which describes the rise of the Twelfth Dynasty, states (l. 58) that the founder of the latter, Amenemhês I, is the child of a Nubian woman. I have often asked myself in this connection whether the somewhat foreign-looking traits of the kings of the Twelfth Dynasty—above all the very salient cheek-bones—are not a legacy from the Nubian ancestress; the Kushites then dwelling in Nubia certainly show somewhat negroid characters.

³ See *El Kubanick-Nord*, pp. 14 foll. [The demonstration may be summarized here for the convenience of readers who have not had access to the work referred to. (a) The archaeological evidence is clean contrary to the view that Negroes inhabited Nubia in the periods of the Old and Middle Kingdoms; thus *nhšyw*, which is applied to the Nubians, cannot mean "Negroes." (b) We possess three Old Kingdom reliefs of

word never possessed this meaning, but rather designated at all times the inhabitants of the south and south-east, and only later referred to the Negroes, and then only through the inclusion of these among the southern peoples. A strong factor in the argumentation is formed by the discovery of two representations in relief of such *nḥšyw* from the middle of the Old Kingdom on the site of the Academy's excavations at the Pyramids of Gizeh. They here appear as typical Hamites, not differing from the accompanying Egyptians in cranial conformation, facial type and figure¹.

Anthropology also gives powerful support to this thesis. The systematic excavations of the Egyptian Survey of Nubia have brought to light throughout Lower Nubia skulls and skeletons, of the period corresponding to the Old Kingdom, which are Hamitic; it is true that a certain percentage with somewhat negroid characters occurs, but this slight admixture is without material importance, particularly as here also no pure Negroes have been found². Thus the fact remains that Hamites dwelt in Nubia during the period of the Old

persons expressly stated to be *nḥšyw*; all these exhibit a type related to the Egyptian not only in physical conformation but in dress and treatment of hair and beard, and show no trace of negroid characteristics. The Old Kingdom hieroglyph determining *nḥšyw* points the same way. (c) Even in the New Kingdom the Puntites, who are demonstrably not Negroes, are more than once referred to as *nḥšyw*. (d) The Nubians are called indifferently *ḥntyw* and *nḥšyw* in the Middle and New Kingdoms, and the term *ḥntyw*, "Trog-lodytes" or the like, cannot refer to pure Negroes. Moreover these old terms were applied to the inhabitants of Nubia after the population of that country had completely changed, in race if not in appearance. (e) Although Negroes may have predominated much later in several provinces they were not called *nḥšyw* because they were Negroes, but, so to speak, in spite of that fact, the term being, as previously, geographical and not ethnic. Ed.]

¹ See JUNKER, *Vorbericht über die zweite Grabung bei den Pyramiden von Gizeh vom 16. Dez. 1912 bis 24. März 1913*, in the *Anzeige der Phil.-hist. Klasse der Akademie der Wissenschaften*, 1913, No. 14, p. 22.

² Derry speaks, *loc. cit.*, of a "slight admixture with Negroes," during the Nubian Old Kingdom. Elliot Smith states, *Arch. Surv. Nub., Report II*, 34: "Our investigations in Nubia have shown that, at a time assigned by Dr Reisner to the Third Dynasty, the Negro element suddenly became more pronounced, although it was still relatively slight in amount." Here he seems to assume a reinforcement of real Negroes. In this connection he adduces (*loc. cit.*) two instances: "As an example of the small Negroes who came north in the times of the Ancient Empire and mingled with the Archaic Egyptian to form the B-group mixture, I might refer to the occupant of Grave 162 in Cemetery 22..." And further: "In spite of the fact that most of these Archaic Negroes were small, tall Negroes also occasionally came north in these early times; thus a Negro in Cemetery 23 (Archaic Nubian) was 1.724 metres in height." Both these cases, however, must be eliminated. Reisner, *Report I*, 180, shows that Cemetery 22 has in the west graves from the time of the Middle Kingdom, and Byzantine burials in the south; only the east perhaps contained a B-group cemetery. But Grave 162 is certainly Byzantine: it is expressly described on p. 183 as: Grave: Christian type VI, orientation West, "body lying at full length on back." No grave-number is given for the other case, from Cemetery 23, but it can be only 23: 28: *Report II*, 124: "A tall (1.724) Negro of the Archaic Nubian or B-group." According to *Report I*, 161, however, No. 23: 28 belongs to the C-group, i.e., to the Middle Kingdom; the position on the left side and the northward orientation further indicate the end of that epoch. Here also, therefore, full Negroes do not occur; the further details as to negroid characters at this period may be collected here:—CEMETERY 7, Early B-group remains, *Report II*, pp. 75 foll.: 202, "typical Egyptian nose in association with definite subnasal prognathism"; 260, "appearance of subnasal prognathism." For the latter B-group: 112, "very slight prognathism"; 119, "subnasal prognathismno definite Negro features but a negroid appearance"; 146 A, "moderate subnasal prognathism"; 150 A, "nose somewhat broad with prominent bridge slight prognathism and subnasal flattening." CEMETERY 17, No. 51, "...ovoid skull.....flat nose of Negro type"; 55, "a suspicion of Negro admixture but no prognathism." CEMETERY 23: p. 129, No. 75, claimed to be Archaic Nubian, belongs to C-group, see *Report I*, 164; 81, "very slight subnasal prognathism"; 85 belongs to C-group; 86 the same. CEMETERY 41: p. 155, grave 215, "margins of the nares are infantile and negroid.....slight apparent

Kingdom, and that Egypt was also at that time in no direct communication with the Negroes.

That this conclusion is correct is shown by the known facts in the subsequent period of Egyptian History, the Middle Kingdom, which comprises the time from 2000 to 1700 B.C.

Before this great changes had taken place in the south. Tribal groups penetrated from the Sūdān northwards, and rolled through the whole of Nubia right into Egyptian territory, as is shown by the Academy's excavations in North El-Kubāniyeh. But these new neighbours of Egypt, coming from the south, are again decided Hamites. Thus in the previous period the whole population to deep within the Sūdān must have been Hamitic, and neither in the Middle Kingdom nor previously can Negroes have dwelt in Nubia.

We are now able to divide the new races which meet us here into various groups or tribes: the northern, which covers the territory between the First and Second Cataracts; the southern, whose principal seat was in the province of Dongola; and the middle, who probably occupied the territory between the Third and Second Cataracts, or roughly speaking Dar Sukkōd and Dar Mahas¹.

It has been said that these peoples were in essentials Hamites. No definitive results have, however, been arrived at with regard to a more precise classification. The editors of the material brought to light by the Nubian Survey consider the northern group to be Hamites showing a not inconsiderable admixture of Negro blood, this however being not recent but of long standing, and having resulted in a stable mixed type with markedly predominant Hamitic elements. In addition to this they assume a repeated immigration of Negroes from the south.

We are in the fortunate position of being able in part to test these views independently. The Academy has had cemeteries of this group excavated in two separate places, namely, at the northernmost point of their territory, at North El-Kubāniyeh, and at the most southerly point investigated hitherto, at Toshkeh, which is only about ninety kilometres distant from the second Cataract. For Kubāniyeh we have the above-mentioned work of Toldt, who was not able to find any considerable admixture of Negro elements in any of the skulls; a Negro skull was not found there at all. The material from Toshkeh has been rendered available expressly for the purposes of the present investigation through the courtesy of Professor Pösch and Herr Szombaty, and Professor Pösch's researches have led to the same conclusions as those obtained by Toldt for Kubāniyeh². The discrepancy in these views is in part explained by the fact that Elliot Smith and Derry included without distinction the latest burials in the above-named cemeteries, some of these burials extending

prognathism"; 216, "there is evident prognathism." CEMETERY 43, p. 162. Grave 4, woman, "skull is distinctly negroid.....the mandible.....is distinctly negroid, the margins of the nares are negroid, and the nose is flat": the date of the grave is not certain; the position is that of the C-group; 43, woman, "skull is ovoid, with a flat nose. The margins of the nares are sharp. There is apparent prognathism." CEMETERY 45, pp. 167 foll. Grave 206, "slight apparent prognathism"; 213b, woman, "apparent prognathism"; 235, woman, ditto; 207, "the face is distinctly negroid, but the nose has been fairly prominent." These quotations show how little we are entitled to speak of a Negro population in Nubia during the Old Kingdom; no full Negroes occur, and strongly negroid skulls are equally to seek, since No. 43:4 must be eliminated as uncertain. It can thus be a matter only of accretions to a population, including a few slightly negroid individuals, almost exclusively women; see also footnote 1, end, next page.

¹ See *El Kubāniyeh-Nord*, 18 foll.

² Weigall's summary statement in *A Report on the Antiquities of Lower Nubia*, 29, must certainly rest on a misinterpretation of cranial characteristics: "The skulls which the writer brought back from Toshkeh and elsewhere do not prove anything. Most of them are negro, and a few are Egyptian."

up to, and perhaps also into, the New Kingdom. Moreover they have in one case certainly taken into their calculations the burials of a cemetery which, as is now clear, belongs to another group and to a later period. The result of an examination of the material published by the Survey of Nubia is that convincing evidence of the occurrence of full Negroes during the period of the C-group proper is not forthcoming¹.

The investigations into the southern group are not yet available in a complete form. I am speaking now of the gigantic burial grounds at Kerma, which were excavated by Reisner in the years 1913 to 1915. All that is at present certain is that we have here essentially to do with Hamites, who here, deeper in the Sūdān, are perhaps crossed with Negro blood to a somewhat greater degree. The bodies of the chieftains show such a decided and pure Hamite type that Reisner declares them to be Egyptians, and believes that he can find in this fact confirmation of his theory of an Egyptian domination of Nubian natives. But the conclusions which he draws from the archaeological material are not really valid²; a difference in physical appearance between rulers and subjects is found

¹ Here again I may collect the detailed statements and make the necessary corrections. CEMETERY 7, *Report II*, 35. The skeletons dealt with here do not come from the C-group, but from a related, more southerly tribe, and doubtless belong to the New Kingdom (see my publication of North Kubāntyeh, p. 30). Here also, however, no full Negro occurs, since even No. 162 A does not show negroid traits. CEMETERY 23. Grave 28 belongs, as shown above, to the quite late C-group; occupant perhaps an immigrant, "Negro, skull is broken; there is extreme prognathism"; 75, late C-group, woman, "Face is distinctly prognathous. The margins of the nares are negroid. The bridge of the nose is flat and broad"; 81, "very slight subnasal prognathism"; 86, woman, "flat negroid prognathous face." CEMETERY 29. This cemetery belongs to the quite late C-group, as is shown by orientation and pottery. 29:1, "Egyptian type with little evidence of Negro mixture"; 9, "Negro.....the face is pure Negro.....the hair consists of typical Negro peppercorns."—There must here, however, be some mistake in the grave-numbering, since Reisner, *Report I*, 189, has for No. 29:9, "Infant, disturbed by weight of grave filling." 29:10, "very slight subnasal prognathism"; 29:12, man, "Skull is broken and distorted. The face is distinctly negroid....There is well-marked subnasal prognathism"; 29:102 is of uncertain date. CEMETERY 30. Grave 11, immediately before the New Kingdom, "face slightly prognathous"; 12, of the same period, "considerable apparent prognathism"; 5, old woman, "The face is strongly negroid; the forehead very retreating and the jaw is negroid." The period is given as early C-group; yet the grave extends into Grave 4 of the C-group. 31, woman of the later C-group, "slight prognathism and the nose is broad." CEMETERY 41. Grave 503, man, "with a prognathic and somewhat Australoid type of face"; 515, woman, "distinctly negroid"; 529, woman, "slight subnasal prognathism"; 530, woman, "distinctly negroid." CEMETERY 45. Grave 257, woman, "There is slight but definite prognathism."

Up to this point it is seen that pure Negroes are assumed in two cases: one, however, 23:28, belongs to the final C-group; there thus remains only 29:9, the numbering of which is however probably in error. Apart from this there are five cases of strongly negroid skulls.

Derry, who had at his disposal the material from several cemeteries lying further south, writes, *Bulletin 6*, *penit.* 19: "we have the most definite evidence (see Plates II, III, IV, and V) that fresh Negroes came north from time to time, adding to the population elements by no means uniform in their physical traits."

In so far as a fairly marked manifestation of negroid traits is here meant, the statement may be freely conceded, but if this phenomenon is attributed to a temporary reinforcement of full Negroes, it must be pointed out that evidence for this is lacking. For cemeteries 1 to 45 see above; the reproductions in Pls. III, 2-4, IV, 3-4 in *Bulletin 6* show only strongly negroid traits, as indeed is stated in the captions thereto; comparison with the negress in Pl. VI makes the difference clear. It is for the rest surprising that the negroid characters appear almost exclusively with women. Toldt points out to me that it is with this sex that greater and more frequent deviations from the normal type occur, and that one must therefore proceed with double caution in drawing conclusions as to an admixture of foreign elements.

² See *El Kubanish-Nord*, 20 foll.

elsewhere, for example during the New Kingdom, in Punt, on the coast of Somäliland, the chieftains of which are given a much lighter colouring than their people in the representations. Present-day Africa also offers numerous parallels; I need mention only the Hima and Tusi among the Bantu, and the Woronga among the Nyam-nyam.

The conclusion that during the whole period of the Middle Kingdom Nubia was inhabited not by Negroes but by Hamites finds confirmation in the fact that where we find representations of Nubians belonging to that time these show a type related in all respects to that of the Egyptians. The principal documents are the victory-relief of Mentuhotpe at Gebelén, the victory-stela of Sesostri I at Wädy Halfeh, and perhaps also a group of soldiers at Beni Hasan¹. The well-known wooden figures from the tomb of Mesehti at Siût have been invoked in support of the theory of a Negro population of Nubia. In these a body of Egyptian soldiers is accompanied by Nubian mercenaries: these latter have been claimed to be Negroes, but on what ground is not at all clear. I have been able to examine their appearance afresh from the first-rate photographs of the Berlin Academy; they are typical Hamites, devoid of the specific characters of the black races².

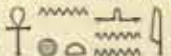
Perhaps, however, we can indirectly infer something regarding the history of the Negroes in this period. The above-mentioned northward penetration of the Nubians, which must have set in between the Old and Middle Kingdoms, should probably be attributed to strong pressure in the south, and this pressure must have arisen from the Negroes, whom we shall find appearing later as southerly neighbours of the Hamites.

After the decline of Egypt during the so-called Hyksos period, the country arose to fresh prosperity, and the New Kingdom began about 1600 B.C. In this period we meet for the first time with numerous representations of genuine Negro peoples. The Egyptian artist, who had of old an uncommonly sharp eye for what was typical and characteristic, depicts us the black figures, gently caricatured, in a mature style which was never surpassed³.

¹ See W. MAX MÜLLER, *Asien und Europa*, 6-7.

² I have similar doubts with regard to the "Negro troops" in the tomb of Thanuny at Shêkh 'Abd el-Kurneh (No. 74), of the New Kingdom. Wreszinski writes in his *Atlas zur altaegyptischen Kulturgeschichte*, Pl. 23, of the lower line of soldiers: "On the right are marching seven Negroes, the first two of which are carrying trumpets (?), while the five others are armed with throwing-sticks." But the photograph seems to give little support to this view. I do not see that their colour is darker than that of the group on the left-hand side. The facial conformation is in no respect different from that of the Egyptian soldiers on the left or in the upper register: note the sharp lips of soldiers nos. 3 and 7. The hair might be that of Negroes, but just as well, and much more probably, Hamitic hair, which is at the present day still worn in similar fashion. Finally, the more usual adornment of Negroes was a single ostrich-feather, while the soldiers reproduced here wear the double crossed ostrich feathers. To recognize the obvious contrast with real Negroes, contemporary representations of the latter, e.g. in the tomb of Sebekhotpe, 'Abd el-Kurneh 64, WRESZINSKI, *op. cit.*, Pl. 56a, should be compared.

[Dr Junker states in a letter that since the first publication of his lecture the above observations on the supposed Negroes in the tomb of Thanuny have received confirmation from Herr Wreszinski, who informs him that according to the original photograph their colour is not black, and their hair no true Negro hair.

Dr Junker also points out in a letter that the representation of the *nhktyt*  on her stela figured DE MORGAN, *Fouilles à Dahchour*, I, 39, which has been taken for that of a negress, is not necessarily one. The facial type, he writes, is not more negroid than Hamitic; the style of the hair is Nubian, but is not that of a negress, and resembles that of the Nubian women in the tombs of Anena and Rekmirê at Thebes; the colour of the skin is not indicated in the publication.—Ed.]

³ For good representations of typical Negroes, see, for example, LEPS., *Denkm.*, III, 120-1, Tomb of Haremhab, *Mémoires de la Mission*, v, Pl. IV; good reproductions are WRESZINSKI, *Atlas*, Pls. 56a, 35; *Wall Decorations of Egyptian Tombs illustrated from examples in the British Museum*, Fig. 9, p. 15.

Now, therefore, the Negroes enter definitely into the circle of historic peoples. But we need not content ourselves with the establishment of this general fact. It will be worth while to investigate the question whether at this time they had really pushed their *habitat* further northwards, and further at what point of time direct contact with them was effected.

It is significant that the first encounters with the Negroes of which we have any knowledge occurred through two quite different channels. When Queen Hatshepsowet, in the ninth year of her reign, *i.e.*, 1482 B.C., sent a great fleet to the land of Punt, which included roughly the regions of Italian Eritrea and of British Somaliland, the expedition there met with genuine Negroes as well as half-breeds among the Hamitic Puntites. In the famous pictures of the rock temple at Dêr el-Bahrî¹ we see them moving about among the round huts built on piles. Whether they lived in a state of subjection to the real inhabitants of the country, or had settled beside them in the harbour district, or had merely come from the hinterland for purposes of trade, are matters of conjecture.

At about the same time occurred the other encounter, in the countries of the Upper Nile. In this case we may be certain that the meeting was brought about not by influx of Negroes but by the extension of the Egyptian frontier. The realm of the Middle Kingdom had extended only a little distance into the region of the Second Cataract, to about fifty kilometres south of Wâdy Halfeh. But one of the first rulers of the New Kingdom, Tuthmosis I, extended it in a victorious campaign, pushing it as far as Napata, some 600 kilometres south of the previous frontier. Naturally in the incorporation of so much territory tribes belonging to other races now became subjects or neighbours of Egypt. But it seems that even here, so greatly further south, Negroes are not yet to be looked for in the Nile Valley. Tuthmosis presented a part of the captives to the Temple of Amûn as slaves. A group of them, men, women and children, is represented in the tomb of Anena at Thebes, and they are not Negroes but typical Hamites. I have been able to collate the reproductions in *Mémoires de la Mission*, XVIII, 9, with the photograph (No. 776) of the Foreign Peoples Expedition of the Berlin Academy and thus obtain a reliable basis for study. We see here brown figures, resembling the Egyptians in structure and facial type; the men, who bring the characteristic products of the Sûdân, such as ebony, are clothed like the Egyptians in a short kilt. The women are unnaturally slender and have loose, pendent breasts; for clothing they wear a long coat of narrow strips sewn together, reaching to the feet and differing materially from the garments which negresses are usually shown as wearing in the later tombs.

We must assume, then, that as far as the Fourth Cataract Tuthmosis I had not yet come upon the actual Negro country. But from this southern point expeditions and skirmishes were doubtless carried out into the settlements of the Blacks, and the neighbouring Negro chieftains certainly acknowledged the supremacy of the Egyptian king by annual tribute of goods and slaves, without, in some cases, their territory being actually subjected to Egypt, and only to protect themselves from raids and plunderings. Finally, many negro tribes of the interior of Africa will have sought out the newly established trading-places of the Egyptians for the sake of barter; others may, at least in isolated cases, have penetrated further into Egyptian territory along the safe routes which now led from Napata to the north.

¹ See NAVILLE, *Deir el Bahari*, III, Pls. LXX, LXXI; text, pp. 12 foll.; see also Pl. LXXIV, text p. 11. Journ. of Egypt. Arch. VII.

These conditions, however, cannot have been the immediate fruit of the first conquest of the territory up to the Fourth Cataract, but must have come about gradually after the consolidation of the new possessions which took place under Tuthmosis II and III. This development explains why, in the first period of the New Kingdom, representations of Negroes still keep the background in the pictures of southern peoples. In the tomb of Anena there are no blacks; in the tomb of Rekhmirê¹, *temp.* Tuthmosis III, out of twelve bringers of tribute from the Sûdân, only two are depicted as Negroes, and among the numerous prisoners of these very same Southerners none at all; they are all the same Hamites that have been described above¹. Very soon, however, Negroes predominate in such representations; thus already in the tomb of Haremhab, who lived under Tuthmosis III and Amenophis III. It must indeed not be left out of account that in many cases there was a stereotyping of the subject-matter and of the figures, the artist obviously taking more pleasure in the comical figures of the Negroes than in the mixed type of the Nubians². Further, the tribute of slaves was doubtless later obtained not so much from the Egyptian province of Kush as from the adjacent states, which acknowledged the Egyptian suzerainty by this tax, just as the Christian kingdoms of the Sûdân were obliged to send their *bakt*-contribution to Cairo annually in the Middle Ages.

Although we have thus no reason to assume a northward movement of masses of Negroes even in this period³, a considerable accretion of Negroes and negroid elements has to be reckoned with in Nubia. Here we meet with blacks in the desert mines and in the quarries, also attached to the strong fortresses and great temples which the Pharaohs founded in Nubia at that time.

In Lower Nubia, on the other hand, at least in the districts adjoining Egypt, there appears to have been another process. Here the Egyptian element increases; side by side

¹ See *Mémoires de la Mission*, v, Pl. VI; cf. text, pp. 34 foll. We have here to do with the princes of the foreign countries of the South, and the Nubians are particularly mentioned: "Twelve Ethiopian envoys. Two of these envoys are blacks; the others are of a red-brown, in some cases comparatively light, in other cases darker; some of them are clothed in kilts of woven stuff, the majority in girdles of spotted animals' skins," etc. They are bringing ebony, elephants' tusks, panther-skins, ostrich feathers, apes, etc. In Pl. VIII = text, p. 39 (cf. SETHE, *Urkunden*, iv, 1102) are presented the prisoners from the foreign countries of the South, who are used as temple slaves. First come eight men of brown pigmentation with panther-skin kilts, then several groups of women with the long coats described above, and finally five naked women. The agreement with the figures in the tomb of Anena is obvious. Here, then, we have before us the actual Nubian type, such as must also have been prevalent at Dongola.

² There is certainly imitation of previous work in the representation of the groups of women. On the other hand it must not be left out of account that in many cases renderings of particular individuals appear to occur, as with the Negroes in the tomb of Haremhab, which doubtless reproduce tribal peculiarities which struck the artist as remarkable. (See Photographs Nos. 746 and 747 of the Berlin "Foreigners" Expedition.) I have attempted to follow up these matters, but am quite unable to do so for lack of material. The publications are for the most part wholly inadequate for the establishment of finer distinctions. A number of pictures are lacking in the photographs of the Berlin "Foreigners" Expedition, and apart from this, for many important matters the photographs cannot be used with sufficient confidence in view of the state of preservation of some of the paintings. I am convinced, however, that much of importance for the study of the Negro races of that time would emerge from an exact study of the details.

³ Although, in the New Kingdom division of the classes of mankind into *rmṯ*, "Egyptian," *ḥm*, "Asiatic," *nḥš*, "Southerner," *ṯmḥw*, "Libyan" (see LEPS., *Denkm.*, III, Pl. 136), the *nḥš* appear as Negroes, this of course proves nothing for the near neighbourhood of the Negroes to Egypt, and as little for the contemporary meaning of the name *nḥš*. The blacks appear in this connection as representatives of the South, as do the Asiatics for the (North-)East and the Libyans for the West; they were now, as a matter of fact, the tribes adjoining the enlarged Egyptian empire in the south.

with the foundation of purely Egyptian settlements, an intensive colonisation appears to have taken place in such a way that the majority of the native men were eliminated, and the women were married to Egyptians. For the anthropological data show the Egyptian type on some occasions quite predominant in these districts during the New Kingdom as regards the male skulls, while a considerable number of the women's skulls are Nubian¹. Nubia has many times had to undergo a similar forcible modification of the race in later periods, as during the compulsory Islamization, and in a limited area in still more recent times through the compulsory settlement of Muhammedan Albanians in the provinces of Dirr, Ermenneh and Argin.

But further south the population remained exempt from this fate. The only Egyptians dwelling here will have been the officials and the priests in the temples, the garrisons in the fortresses and such traders as there may have been.

We see this clearly at Ibrim, 100 kilometres north of the Second Cataract. Here a native prince ruled under Tutankhamun, about 1350 B.C., as at Areika, situated somewhat further north. Huy has represented him for us in his tomb at Thebes. The owner of the tomb there receives the homage and tribute of the great men of Nubia; among these appears, in a prominent position, and with strong Negro characters, "the Prince of M^cm (Ibrim), the good ruler." The reproduction of the southerners is here by no means uniform; we find Hamites and Negroes mixed, but the latter are quite predominant². The artist has evidently not been willing to undertake the task of giving to each of the numerous tribes its particular characteristics, and certainly did not know them all from his own observation. It would thus be premature to draw fixed conclusions from the picture. We are in a position to demonstrate this positively through contemporary anthropological material from the territory of the above-mentioned prince of Ibrim. In 1911 a New Kingdom cemetery at Ermenneh, some 30 kilometres south of Ibrim, was excavated on behalf of the Academy of Sciences. The investigations of Prof. Pösch showed that out of about 60 well-preserved skulls only four were of decidedly Negro type, all of these coming from young negresses, while seven showed negroid traits, mostly very slight. All the remaining skulls are non-negroid, and exhibit the two classes of more refined and coarser types pointed out by Toldt in Kubāniyeh.

At that time, therefore, Hamites dwelt as previously not far from the Second Cataract, but they now begin to receive a more considerable admixture of Negro blood, although by no means so much as the representations would lead us to suppose. We must conceive of

¹ See *Report II*, 130-1: "These, however, suffice to show that, as in graves of the time of the New Empire examined elsewhere in Nubia, a large proportion of the men and some of the women conform to the Egyptian type, but they are mixed with a few Nubian men and a considerable number of Nubian women." See also especially the results from Cemetery 7, *op. cit.*, 88 foll., particularly page 92.

² Photographs Nos. 582-588 of the Berlin "Foreigners" Expedition were at my disposal for the study of the representations in the tomb of Huy. While the faces appear as of a Negro type in most of these, those of the "Prince of all Foreign Countries," of the Princess, of the woman waggoner and probably also of the two cattle-drivers, are Hamitic; also the kneeling princes in the uppermost register appear less negroid in comparison with the carriers in their rear. For the most part their hair is arranged in the form of a cap or wig; it is very doubtful whether we have here artificially matted hair and not rather a variety of Hamite hair (similar to that of the Nubians in Photo. No. 748 of the Berlin "Foreigners" Expedition), as Professor Pösch also points out to me. The short woolly hair of the Negroes does not appear, on the contrary the Princes' hair is dressed in Egyptian style, as also that of the fan-bearers and cattle-drivers.

similar conditions as being prevalent as far as the southern boundary of the Egyptian province. The modification which has been noted is doubtless to be attributed chiefly to Negro slaves, who came hither either in the performance of military duties or by way of trade. We may recall the similar conditions in Nubia only a few decades ago, before the abolition of slavery.

If we now, in conclusion, summarize the evidence regarding the first appearance of the Negroes in history, we find it quite clear, in the first place, that in the oldest periods they came into no contact with the civilization of Egypt. Further, the assumption made hitherto, that as far back as the Old Kingdom they had penetrated into Nubia and had become neighbours of Egypt, has proved to be untenable. Indirectly we may perhaps infer the presence of the blacks in the transitional period before the Middle Kingdom, since the northward trend of the Kushites in that epoch is doubtless to be attributed to pressure from the Negro tribes in the South. But at this time, as previously, the Nubians are true Hamites.

The great victories of the New Kingdom brought Egypt, at about 1500 B.C., for the first time in direct contact with the Blacks, whose *habitat* is to be sought south of the Fourth Cataract. At the same time we meet them on the coast of Somaliland, at about the same latitude. The territory of the Negroes proper thus extended at that time almost exactly as far as at present, or only a little further northward.

During the War great excavations were carried out in Nubia. They were chiefly confined to the large monuments in the neighbourhood of Napata—the sites of Gebel Barkal and the Pyramids of Nûri, and threw new light on the history of the Nubian dynasties of the late period. For the great question of the distribution of races in Nubia and the history of its tribes, they are of only subordinate importance. Information on the subject will doubtless be given us less by the oft-plundered Capitals than by the simple cemeteries which must lie there, hidden under the sand, and from which rich anthropological material is to be hoped. May work on them, more thankless and less productive of museum objects, not be forgotten, and be undertaken before here as elsewhere the waters of the projected great barrages annihilate most of them and render impossible the final solution and full classification of these problems.

THE EARLY CHRONOLOGY OF SUMER AND EGYPT AND THE SIMILARITIES IN THEIR CULTURE

BY PROFESSOR S. LANGDON, M.A.

WE now possess, in almost complete form, trustworthy material for reconstructing the chronology of the early history of Mesopotamian civilization. Hitherto the earliest date established with reasonable certainty by dead reckoning and astronomy was 2474 B.C., that being the date of the founding of the Sumerian empire of Ur by Ur-Engur. This date is still disputed by some Assyriologists, notably by Weidner, who reduces it by about a century and a half; but, so far as the present state of our knowledge permits us to judge, its accuracy seems indisputable, for it is controlled by several statements of dead reckoning in the inscriptions, as well as by Berossus. Before 2474, the date when the last great Sumerian dynasty was founded, we have now dynastic lists, or summaries of them, for no less than eighteen dynasties. The most important early dynastic tables have been found at Nippur, and one was purchased from a dealer in Paris¹. These tablets purport to contain the names of all the kings who ruled over the united lands of Sumer and Accad from the Flood to the age in which they were written. The chronologists of the temple school at Nippur wrote toward the end of the period when Isin was the reigning city, that is during the twenty-third century B.C. They compiled the entire chronology, in some redactions upon one huge tablet having six columns on either side and each column containing about 45 lines. At the end of these great tablets we are told that eleven different cities had served as dynastic capitals, and three of these cities had been the capital more than once. It is evident that from the period of the earliest traditions the Sumerians had been pressed southwards and confined in the area between the head of the Persian Gulf and a point not far south of Babylon. For the Sumerian scholars themselves, even for those of the ancient seat of learning at Nippur, the Semite had always been in the land. The age when the Sumerian enjoyed unchallenged occupation of the whole of Mesopotamia, as he surely once did, was so remote that there is not even a tradition of a Sumerian occupation of the northern cities. The history of early Babylonia is thus truly the history of the two kingdoms of the south and north, or rather of two peoples, the Sumerians in the south and the Semites in the north. It must, moreover, be emphasized that when the Semite arrived in Mesopotamia he occupied Sumerian cities that were already of some antiquity. The most ancient centre of Semitic influence was at Kish in Accad, and the most ancient capital of Sumer was Erech. But at no period in our records were the kingdoms of the south and north divided, as they were in Egypt². Undoubtedly Erech and Kish correspond in a

¹ The latter tablet, generally known as the "Scheil dynastic tablet," differs in form from the Nippur dynastic lists in that it bears only a single column and enumerates the names of the kings only of the dynasties of Aksak, Kish (Fourth Dynasty), Erech (Third Dynasty), and Agade. It probably belonged to a series of tablets which contained the lists from the earliest times to the period of Hammurabi.

² Such is the statement to be inferred from the dynastic tablets, but I regard the first two kingdoms as contemporary.

measure to Buto and Nekhen in Egypt, but political power had been consolidated at a period before 4000—so early in fact, that there is no clear tradition of a divided empire.

By means of numerous duplicates of the dynastic lists the first real historic dynasty can be placed by dead reckoning at about 4200 B.C. In that age king Mesannipadda of Ur is said to have secured control of the two lands and reigned 80 years. Before 4200 the dynastic lists place two long semi-mythical dynasties, which correspond in a measure to the demigods and the age of the Horus-worshippers in Egypt. Of these two long dynasties belonging to the age before 4200, the first is attributed to the Semitic northern capital of Kish, about twenty-one kings, of whom the names of nine are known; fabulous lengths are assigned to their reigns, 1200, 900, 840, 780 years, etc. The next kingdom of prehistoric times ruled at the southern capital of Erech, about 11 kings, of whom the names of five are known; fabulous reigns are likewise attributed to them, 1200, 420, 325, 126, 100 years. This long prehistoric period, to which over 26,700 years are assigned, contains the names of several kings who became gods or demigods in later mythology. The lists actually place the determinative for god before the names of Lugalbanda, Tammuz and Gilgamish of the first kingdom of Erech. Among the kings of the first dynasty of Kish, Etana the shepherd became in later legend a demigod: he is said to have ruled all lands and to have ascended to heaven on the back of an eagle in order to obtain the plant of renewed birth, or the plant of life.

Three kings of the prehistoric Sumerian dynasty of the south became demigods in later legend. Tammuz, who corresponds to Osiris of the Egyptian religion, was identified with the older Abu of Sumerian mythology and became the dying god, incarnation of perishing vegetation, who descended yearly into the plains of death. There is a striking resemblance between these prehistoric kings of Sumer and Accad and the semi-divine kings of Egypt who ruled, according to Manetho, before Menes. Manetho calls them "the Dead Kings," and the Turin Papyrus "The Spirits, the Horus-servers," who ruled Egypt for 13,420 years. They are identified with the rulers of the old kingdoms of Buto and Nekhen, before the union of the two lands under Menes. It is extremely probable that the two semi-historic dynasties of Kish and Erech were likewise contemporary rulers of the north and south in Mesopotamia and are erroneously placed in consecutive order by the chronologists of Nippur. This extraordinary similarity in the historical traditions of prehistoric Egypt and Sumer cannot, of course, be used to show actual contact between them. But both traditions seem to indicate that in both lands there was a long political history of divided kingdoms before real history began. Certainly 500 or 1000 years can be attributed to the demigods of Sumer and Accad before 4200 B.C. Thus 5000 B.C. seems a conservative date for the origin of Sumerian and Semitic history.

But there are such striking similarities between the important religious beliefs of Sumer and Egypt that it seems necessary to assume relations of some kind here. Tammuz is always associated with the virgin-mother goddess Innini, who is his sister in the old Sumerian mythology. This is also the Egyptian view of the relation between Isis and Osiris, and the mystic rituals of both cults are similar. The theory of the emanation of all things divine and earthly from the god of heaven and the earth-goddess in Sumer is similar, except that the genders are reversed, to the belief in the union of the Egyptian Nut and Geb. The daily voyage of the sun across the heavens and through the nether sea in a bark is characteristic of both peoples. There is the remarkable connection between Tammuz and Innini, with their ophidian worship, and the same ophidian aspects of Osiris and Isis. In both lands we have primitive figures of the mother and child.

The theology and complex pantheon of Babylonia is almost entirely Sumerian; so are the great mythological legends and the names of the gods. The Semite exerted very little influence in any department of these origins, and my impression is that this was also true of the origins of Egyptian religion. The mentality of the prehistoric Egyptian and Sumerian is so similar, their remarkable logic in reducing the spiritual phenomena of man to a complex theological system is so closely parallel, that an explanation is urgently called for. Sumerian is a highly organized agglutinating language, and there seems to be no linguistic connection with Egyptian as we know it. At any rate, Egyptian religion is clearly non-Semitic in origin and related to Sumerian.

It seems clear that the Semites who migrated into Mesopotamia, and became the Accadians of the northern kingdom, came from south Arabia; they were closely related to the so-called Himyaritic-Sabaeen civilization of the Red Sea coast. This is evident both from the similarity of the verbal conjugation and from the vocabularies. Only Accadian and Sabaeen possess the Semitic verbs *danānu*, "be strong," *na'ādu*, "revere," and *šaḫḫu*, "be high." Ethiopic, a direct descendant of this South Arabic group, usually agrees with Accadian in grammar and vocabulary over against all the other Semitic languages. The Semite arrived in Babylonia at a very early period, certainly before 5000 B.C. and he conceivably invaded Egypt, probably by the Wādy Hammāmāt, somewhat later. But although he succeeded in completely transforming Egyptian into a semi-Semitic language, he had no such success in Sumer. There is little trace of Semitic influence upon Sumerian grammar, and very little upon the vocabulary. For the present, however, the problem of racial connection or cultural influence between prehistoric Sumer and Egypt must rest here. These things existed, and cannot be explained away.

Now, before taking up the problem of actual cultural contact in historical times, I shall attempt to fix the period of the First and Second Egyptian Dynasties by means of our recently established Sumerian and Accadian chronology.

From about 4200, or the old kingdom of Ur, the seats of the various capitals which ruled the united lands are completely known. The names of nearly all the kings from 4200 onward are ascertained, and the lengths of the dynasties established, except for small margins of uncertainty in two cases. From Ur in the south the dynastic power passed to Awan, a city east of the Tigris, where it remained 356 years. There were only four kings of Awan, and I reduce the figure 356 to 100. Ur in the south regained the supremacy about 3950, where its four kings ruled 108 years. About this time the old thin geometrical pottery was being made in Elam; enough of it has been found in Sumer by Hall and Thompson to assure us of its manufacture there. Now an obvious connection exists between the designs of animals and plants on the pottery of the period, about 4000 B.C., and the oldest known Sumerian pictographs. Writing must have been developed at about this period, and some of our oldest inscriptions may possibly go back to the second kingdom of Ur.

The next capital was Kish in the north, where, according to a dynastic tablet, six kings ruled for 3792 years. There is probably an error of 3600 years in the scribe's figures here, the sign for 3600 being inadvertently prefixed to the number. After a short interval in the ascendancy of Kish, when the power passed for seven years to the city Hamazi, east of the Tigris near Awan, Kish regained control; and we now, with this third dynasty of Kish, reach the period of actual inscriptions in which the names of some of its six kings are mentioned. One of its kings, Mesilim, figured largely in the history of the period. The third kingdom of Kish, to which belonged also Urzaged, Lugaltarsi and Enbi-Ashdar, reigned not

later than 3638—3488, when Erech in the south again became the capital, four kings ruling there about 130 years. Three of the names of this dynasty are known, Enšagkušanna, Lugalkigubnidudu and Lugalkisalsi. Adab, a city in Sumer between Nippur and Erech, now obtained the hegemony of the two lands for 90 years. A dynastic tablet recently discovered by Legrain assigns the whole period to only one king, Lugalannamundu, but the names of at least two others are known. Two dynasties in the north, that of Ma-er on the middle Euphrates, followed by that of Akšak, later renamed Opis, on the Tigris at the mouth of the Adhem, ruled from about 3268—3089.

With the foundation of the kingdom of Akšak or Opis in 3188 there is no longer much uncertainty in fixing the chronology of Sumer and Accad with reference to the accepted date of Ur-Engur, 2474. After Akšak, Kish again obtained the hegemony for 192 years, which brings us to the period of the well-known conqueror, Lugalzaggisi of Erech. This Sumerian *patesi* of Umma in the south had served under the later kings of the fourth dynasty of Kish, and finally, after wars with neighbouring Sumerian cities, subdued the south and overthrew the Semitic kingdom at Kish. He made Erech his capital, and ruled 25 years.

Sargon, a priest or cup-bearer in the cult of Ur-Ilbaba, a deified king of the preceding kingdom of Kish, organized a rebellion in the north, united the Semites and overthrew the king of Erech. He now founded the famous dynasty of Agade at a city near Sippar in 2872, and reigned 55 years. Sargon subdued the greater part of Western Asia and founded a great empire, the first in history, ruling from Elam to the shores of the Mediterranean Sea and Anatolia. He was succeeded by his son Rimush, who ruled 15 years and was in turn succeeded by his son Manishtesu, who ruled seven years. In 2795 Narām-Sin, son of Manishtesu, ascended the throne and reigned 56 years. He is the most brilliant figure in early Asiatic history, and in his reign it can be shown that Sumer and Accad came under Egyptian influence. In order to prove this point, and to fix approximately the period of Menes and the first two Egyptian dynasties, it will be necessary to describe the methods of year-dating in these two lands.

Narām-Sin introduced a new method of year-dating by promulgating an official date at the beginning of the year. For example, a revenue account written in Sumerian from Lagaš is dated in the following manner: "In the year after Narām-Sin laid the foundation of the temple of Enlil in Nippur and of the temple of Innini in *INNINI-AB*." A clay tag attached to a jar of clay tablets sent from Agade to Lagaš in the reign of Narām-Sin's successor is dated by this formula: "In the year after Shargalisharri [conquered] the Amorite [in Basar]¹." It is now known that the event selected for an official date occurred in the preceding year, and consequently a large number of dates refer to events which could not be known at the beginning of the calendar year. These dates are taken from the archives of the Sumerian city of Lagaš in the far south, where the official year-dates of Agade were imposed. The annual formula was written in Semitic, which proves that this innovation was introduced by the Semitic kings of Agade, most probably by Narām-Sin².

¹ THUREAU-DANGIN, *Recueil de Tablettes Chaldéennes* [R. T. C.], 85; cf. 124 and the same scholar's *Die sumerischen und akkadischen Königsinschriften*, 225.

² It should be noted that the curious Semitic expression *in ištenit šanat*, "in one year," "in the one year when," which begins in the date-formulae of the period of Agade, occurs only in the inscriptions of Narām-Sin. The full form is *in šattim ištenit štu*, "in the year after," see Statue A, *Délégation en Perse*, VI, Pl. I, col. 1, 8-9 and the Marada door socket, *Revue Assyriologique*, XI, 89, 8-9. The phrase has been hitherto misunderstood. The word *štu* was omitted from the date-formulae for the sake of brevity.

The method of dating a year by an event of the preceding year is cumbrous, and without a date-list similar to the Palermo Stone for the corresponding custom in Egypt it is impossible to determine its place in a reign. The Sumerians adopted the custom, and the dates are sometimes written in Sumerian even in the Agade period; so always under the succeeding dynasties. Should no event of sufficient importance occur to afford a year-date, the formula was made up after the Egyptian method by saying "year after." For example there is a year-date of the period which reads, "Year after Shargalisharri went up to Sumer¹ and smote it, year after that."

But long before the empire of Agade the Sumerians had been using a much more convenient method of dating by regnal years. At Lagaš, in the time of its great *patesis* who owed allegiance to the reigning capital of Kish (fourth kingdom, 3089—2897), the records are dated by the year of the local city viceroys (*patesis*)². There are a few tablets from Šuruppak of an earlier period, probably from the time of the kingdom of Akšak, which are dated by the names of officials who held office for only that year. The Semitic kings of Agade, therefore, were the first to impose a uniform method of year-dates throughout the two lands. Hitherto each city had gone its own way. When Narām-Sin inaugurated this system it is curious that he adopted the Egyptian method, in spite of the fact that the Sumerians had already introduced a more convenient one. It is the more astonishing because the Semites persistently adopted everything they could from the Sumerians: the business documents of the older Semites are drawn up in Sumerian legal terms, and the writing itself was Sumerian, their religion was Sumerian and the Semitic kings often wrote their own names in Sumerian ideograms. It is impossible to explain this new chronological system without assuming some contact with Egypt.

The question now arises as to when the corresponding Egyptian date-system was in use, how it was developed, and at what stage it corresponded precisely to the phraseology adopted by Narām-Sin. If this can be done, and the time-limits fixed when the borrowing must have taken place, it will be possible to determine the approximate date of the early Egyptian dynasties.

The method of dating a year by some event seems to have been introduced into Egypt by Menes³; the second and third lines of the Palermo Stone preserve a few of these year-dates of the First Dynasty. Menes and his immediate successors used the very simple system of dating years by the feast of the worship of Horus, which occurred every two years, beginning with the second full year of a reign. The second year of Athothis is the year of the worship of Horus, and his fourth, sixth and eighth years are so designated on the Palermo Stone. The first regnal year is indicated by the phrase "Union of the Two Lands." Other years are known in the fragment preserved for the reign of Athothis either by the names of festivals or by events. The date used for his fifth year is "Designing of the House (called) 'Mighty of the Gods.'"

Menes and Athothis, who employ the Horus-worship cycle, do not even determine the number of this festival in their reigns. For example, a document dated in the second

¹ Written *Ki-gi-en*, for *Ki-en-gi*, POEBEL, *Historical and Grammatical Texts*, No. 38.

² For example a contract of sale in the time of the *patesi* Entemena is dated by the numeral 19, THUREAU-DANGIN, *R. T. C.*, No. 9.

My principal authority in the following discussion is Professor SETHE's *Beiträge zur ältesten Geschichte Ägyptens* (Vol. III of *Untersuchungen zur Geschichte und Altertumskunde Ägyptens*), 60 foll. The translations of the dates on the Palermo Stone are taken from BREASTED, *Ancient Records*, I, §§ 90 foll.

year would read "Worship of Horus," not "First occurrence of the Worship of Horus," and it was impossible to say in later years whether such a document belonged to the second, fourth, sixth or eighth year, etc. When a year is dated by an event, the latter is not even preceded by the word "year." A few dates of Menes are known from the monuments. There is the ebony tablet from a tomb at Abydos¹ which fixes a year by three events: "The smiting of the Nubians," "the casting² of Anubis," and an event represented by obscure pictographs, which seem to indicate the taking of a walled city. Two of these events could not possibly have been known at the beginning of the year, and there is nothing to indicate that the reading is "After the smiting of the Nubians." With the year-dates of Menes to Zet, or the first four kings of the First Dynasty for a period of about 150 years, the Egyptians were as yet only feeling after a suitable method of year-dating. If a year was designated by an event it was rather for the purpose of commemorating the event than for practical purposes. The very fact that the Sumerians and Accadians did not pass through this primitive struggle towards a better system proves that they borrowed it from a people among whom it had been perfected. The phraseology of Narām-Sin's year-dates is exact; they begin, "In the first year after" such and such an event occurred, and this indicates that he is later than the first four kings of the First Dynasty. To make Menes a contemporary of Narām-Sin of the twenty-eighth century B.C. is absolutely impossible.

But let us follow the evolution of this interesting Egyptian method of dating years by events. The early kings of the First Dynasty introduced in actual practice at least one valuable indication. They placed their names after the date, which at any rate determines the reign. Under Udmu ("Den"), the fourth successor of Menes, the Egyptians attained a more accurate date-formula. Before the event is placed the sign for "year"; the Palermo Stone omits the sign for "year" until it reaches the Fifth Dynasty. But dates of Udmu, Azab, Semerkhet and Ka'a ("Kā"), which are actually found on ivory and bone tablets, etc., do begin with the word "year." It was of course evident to them that the system of dating by festivals was useless. Of what use would it be to date a contract for the sale of a house in the "Year of Easter of King George," unless we say, for example, "Year of the fifth Easter"? Udmu-Usaphais devised the formula "Year when such and such an event occurred." Although other events and sometimes festivals are added, the specific event, following the word for "year," at any rate gave some precision. There is now extraordinary similarity even in the contents of the date-formulae in Egypt and Accad. "Year when" a temple "was built," "year when" a bowl or statue "was made," "year when" some city "was besieged and captured," are closely parallel to numerous year-dates in Sumer and Accad. Udmu commemorates on one of his tablets, "The first time of the smiting of the Eastern people," and the tablet represents him smiting an Asiatic.

Now with the Second Egyptian Dynasty a new and more efficient method of dating came in, namely by fiscal numberings; these occurred every two years, together with the festival of Horus. The second year of a reign is designated as the "year of the first numbering," the fourth year as the year of the second numbering, and finally the Horus festival disappears under Snefru, last king of the Third Dynasty. The intermediate years are designated by "year after the first numbering," "after the second numbering," etc., and finally, in the Sixth Dynasty, the numberings become yearly. The addition of events to designate a year alongside the numbering probably continued in actual practice until the Fifth Dynasty. In the Fifth Dynasty the Palermo Stone places the word for "year" only before the numbering.

¹ See SETHE, *ibid.*, 62.

² I.e. casting a metal image of the god, see SETHE in *Journal*, I, 234.

It is evident that Narām-Sin could have borrowed his phraseology not earlier than Udmu (Usaphais), and that it may have been in practical use in Egypt as late as the Fourth Dynasty. The most probable period of borrowing is near the end of the Second Dynasty. Menes, therefore, would have reigned about 450 years before Narām-Sin, that is, about 3200 B.C. To fix the latitude of possibility more accurately it is necessary to have more examples of actually dated documents of the Second and Third Dynasties. But all evidence tends to shew that dating by events did not have vogue in Egypt after Snefru. The Palermo Stone is not a safe guide here; the long list of events for years which it gives for the Fourth and Fifth Dynasties are probably of the nature of annals and not taken from the real date-lists. If the custom went out of actual use in the Second Dynasty it is necessary to reduce Menes to about 3000. But it will appear, I think, on archaeological grounds, that Menes and the foundation of the First Dynasty cannot be reduced to 3000¹.

The conclusions to which I have come, that Narām-Sin cannot be placed before Udmu (Usaphais), and that he is really considerably later, would dispose of the suggestion that Menes is identical with Manium, king of Magan, who was conquered by Narām-Sin. Thus by means of the inscriptions alone it has been possible to shew that Narām-Sin, who reigned 2795—2739, is to be placed somewhere between Udmu and Zoser, founder of the Third Dynasty. I think it will be apparent that we can fix even more closely the relation between the Sargonids of Agade and the Second Dynasty. Sargon and his four descendants reigned 2872—2714, or a period of 158 years, and the dynasty, after Shargalisharri, passed into the hands of feeble kings who kept the empire together for only thirty-nine years. Archaeologists have always been attracted to this brilliant period of the Sargonids of Agade. Sargon reached the silver mines of the Taurus and the cedar forests of Lebanon, even to Iarmuti, which I believe to be the Plain of Sharon and the Shafēla². He is said to have crossed the Western Sea, which probably means that he visited Cyprus and Crete. Sargon also visited Dilmun, a land on the Persian Gulf, from whose ports the sailors of the period appear to have reached the Red Sea by way of the Gulf of Aden. It is probable that the kings of Agade were in contact with Egypt both by way of Syria and the Delta and by way of the southern sea route in the time of Sargon, who may be considered approximately contemporary with Neterimu. Only one important object of art has been recovered from his reign, a large triangular stela of black diorite. It remains unpublished, but one infers from the minute description by Gauthier and Scheil³ that Egyptian art had already influenced the sculpture of Agade. There are here already distinct signs of the birth of the famous school of art which produced the finest masterpieces of sculpture in the long history of Western Asia. No important sculptures and seals from the reigns of the son (Rimush) and the grandson (Manishtesu) of Sargon are known, but the art of the time of Narām-Sin and his successor reveals such delicacy and power that it belongs to a period of its own. The monuments of these two kings are from the hands of a new school; their success cannot be

¹ The Babylonians of the Cassite period also followed the Egyptians in the matter of year-dating. After retaining the Egyptian method of dating by events until the end of the First Babylonian Dynasty (circa 1900), the new Egyptian method of dating by regnal years was adopted by the Cassite kings about 300 years after it had become customary in Egypt (then at its Eleventh Dynasty).

² Reasons for this and the following statements are given in my *History of Sumer and Accad*, now in the press. Sayce places it much farther north, in the region of Arsus, *Journal*, vi, 296, and King, *Legends of Babylon and Egypt*, 9, agrees with Sayce. Poebel, *Historical Texts*, 225, believes that Iarmuti is the plain of Antioch. I agree with Dr Albright as to the location of Iarmuti.

³ *Délégation en Perse*, x, 5-8.

explained as a development of the older Sumerian art, and it perished in the long period of disorder which followed the kings of Agade at the hands of the barbarians from Gutium; after this it was not revived. The illustrations here given (Pls. XXI, XXII) will prove beyond doubt that this art of Agade cannot be a development of the art of Sumer which immediately preceded it. The Stela of the Vultures of Eannatum from Lagash is only about one century before this exquisite bas-relief of Narām-Sin (Pl. XXI). There is here the indescribable touch of Egyptian art; the delicate imitation in sculpture of a surface overlaid with gold leaf *repoussé*. Note especially the living movement of the figures, the fine delineation of plants and the perfect effect of the grouping. It reveals the influence of painting and *repoussé* metal work upon sculpture, and only Egyptian sculpture can have had the advantage of such influence. The origin of such delicate bas-relief work is seen on the mace heads of Narmer and of the "Scorpion" king. There is in Egypt no bas-relief work of the period quite comparable to the Stela of Victory of Narām-Sin, but the aesthetic element, so sadly lacking in all genuine Sumerian art, is characteristic of the painting, metal-work and sculpture of the Second, Third and Fourth Egyptian Dynasties. Its origins and development in Egypt can be perfectly determined, and there is no other explanation for its sudden appearance in Sumer and Accad in the period of the Second Dynasty. The Egyptian people discovered the aesthetic in nature and in the soul of man. That is their imperishable achievement in the history of antiquity.

The cylinder seal is a Sumerian or Elamitic invention which found its way into Egypt in prehistoric times. But before I take up this aspect of the problem I shall emphasize the sudden advance in seal-cylinder engraving under the Sargonids; the *glyptique* of the period also reveals an astonishing improvement upon Sumerian work. The seal of Lugalanda,

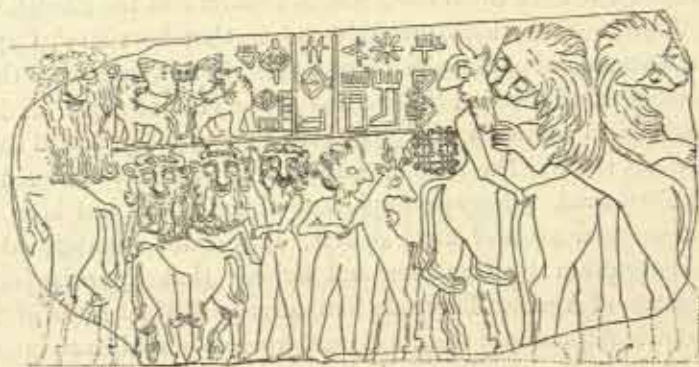


Fig. 1. Seal of Lugalanda.

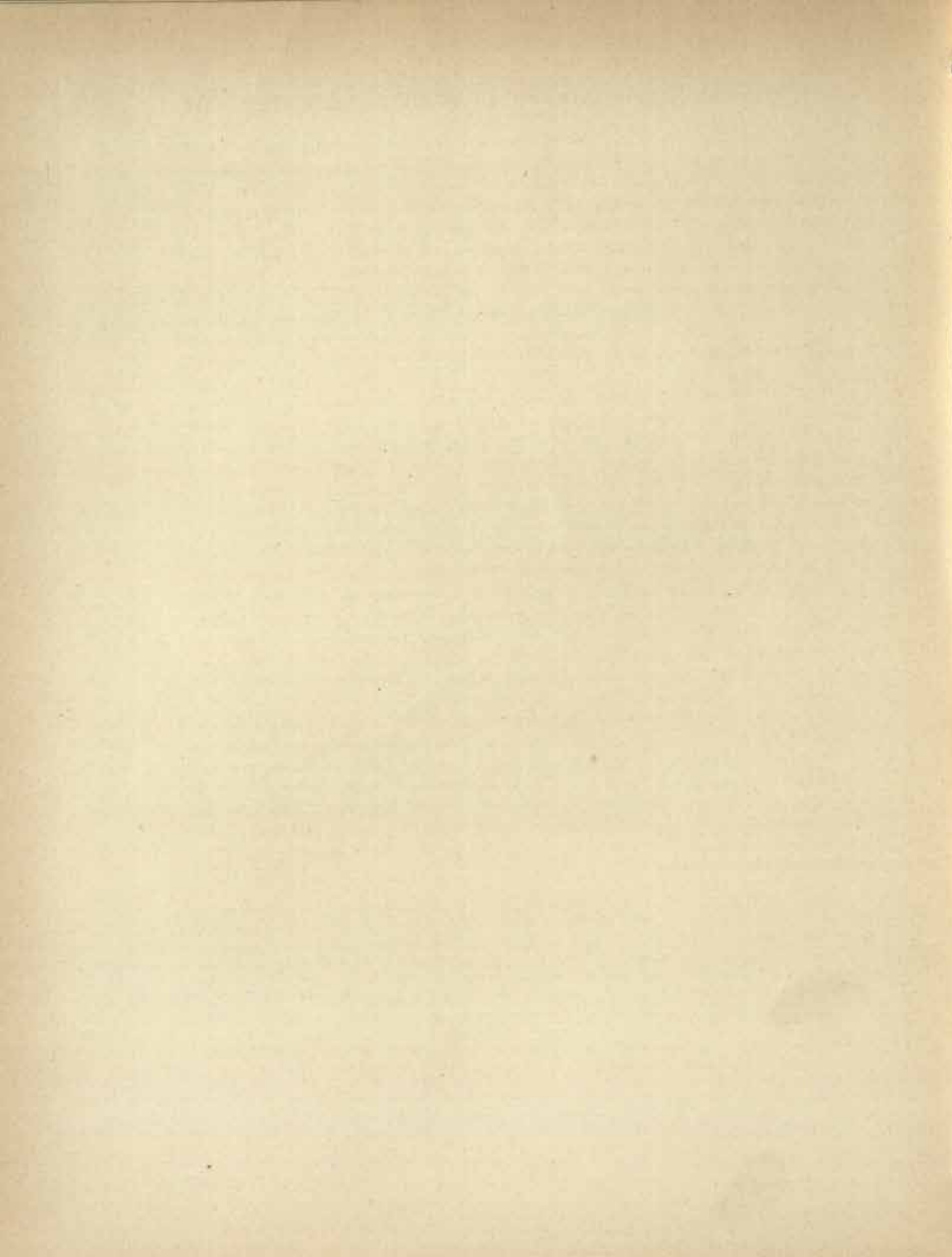
a viceroy of Lagash who lived about 80 years before Narām-Sin, represents the familiar combat of Gilgamesh and Enkidu with lions, the human headed bull and a faun; see Fig. 1. The same subject is treated on a seal dedicated to Bingalisharri¹, son of Narām-Sin. On this seal the treatment is, of course, different, for it was not lawful to engrave seals with precisely the same scene. But the execution of the animal and human figures by the engravers of the Agade period is incomparably superior. This may be attributed to the general improvement in art under Egyptian influence at the capital (Agade) rather than to Egyptian *glyptique* of the period. The famous seal of Ibni-sharri dedicated to Shargalisharri, last of the Sargonids of Agade, is justly regarded as the finest piece of ancient *glyptique*; see

¹ Or read *Sapin-gali-jarri*? The seal belonged to Ibni-sharri, a scribe.



"Stela of Victory" of Narām-Sin

THE EARLY CHRONOLOGY OF SUMER AND EGYPT (I)



Pl. XXII, Fig. 4. The subject is Gilgamesh watering a buffalo from an overflowing vase beside a stream; and there is nothing in Egyptian *glyptique* of the period comparable to this seal. The contemporary seals from the end of the First Dynasty and the Second Dynasty usually contain nothing but well-cut inscriptions¹. The inferiority of contemporary Egyptian seal-engraving is difficult to explain in view of their superiority in sculpture and painting and metal work. The cylinder in Egypt was a Sumerian and Elamitic importation; skill in gem-engraving was not developed here. Sayce most aptly remarks, "Upper Egypt is a land of stone, and the river silt, which is mixed with sand, is altogether unsuited for the purpose of writing²." The Egyptians had not the incentive of the Sumerians and Babylonians, who were constantly using the seal to sign clay tablets. The fine *glyptique* which thrived in Sumer and Accad in the period of the Sargonids is an independent development of earlier Sumerian art.

There is unmistakable resemblance between the methods of treatment in registers in the art of early Sumer and Egypt. Fragments of the Lagaš stela³ which I attribute to the reign of Narām-Sin belong to the same school of sculpture as the Stela of Victory of Narām-Sin; compared with the Slate Palette of Narmer the influence of Egyptian art of the period is even more convincing here. The physical vigour and rude force so characteristic of Sumerian art is replaced by the lighter aesthetic touch of the Egyptian school. The gesture of the conquering king wielding a battle mace over a conquered foe is similar on both monuments. The interlaced monsters with serpent necks and lion heads which form the circular cup of the palette have been fortunately compared with a Sumerian seal⁴ of an earlier period; see Pl. XXII, Fig. 3. An earlier Egyptian palette employs the same fantastic monsters to enclose the circular cup⁵. The *motif* is unmistakably Sumerian, a survival of the pre-dynastic period, but the execution of the palette of Narmer, the mace-heads of his period and the mace of the "Scorpion" king belong to the period of the birth of great Egyptian art, whose reflex influence upon the sculpture of Sumer and Accad explains the brief but brilliant period of Sargonide sculpture.

The evidence afforded by the new method of year-dating is supported by that of the art. Narām-Sin and the kings of Agade were in intimate contact with Egypt, and the period can be determined within 200 years. Narām-Sin reigned not long after Neterimu, and was probably contemporary with the end of the Second Dynasty or approximately so. It is *a priori* incredible that the Sargonids, who had complete control of Syria and the Mediterranean sea-coast, as also of the provinces on both coasts of the Persian Gulf, should not have maintained political and commercial relations with Egypt in the time of the Second and Third Dynasties.

¹ PETRIE, *Royal Tombs of the Earliest Dynasties*, I, Pls. 18-29, with discussion of the inscriptions by Griffith, pp. 34-45; *op. cit.*, II, Pls. 13-24, with discussion by Griffith, pp. 51-54. Elaborate seal impressions from the Third Dynasty will be found in GARSTANG, *Mahâana and Bêt Khallâf*, Pls. 8-10, with interpretations by Sethe, pp. 19-27. The ivory cylinders attributed to the First Dynasty and one engraved with the name of Narmer found at Hierakonpolis contain nothing but repeated figures of men and animals, and the execution is inferior; see CAPART, *Primitive Art in Egypt*, 138.

² SAYCE, *Archaeology of the Cuneiform Inscriptions*, 112.

³ Reproduced in HEUZÉY's *Catalogue des Antiquités Chaldéennes*, No. 21.

⁴ HEUZÉY, in *Compte Rendus de l'Académie des Inscriptions et Belles-Lettres*, 1899, 66-68. This important seal of the Louvre is now published by LOUIS DELAPORTE, *Catalogue des Cylindres Cachets et Pierres Gravées*, Pl. 64, No. 9.

⁵ CAPART, *Primitive Art*, 232.

Narām-Sin repeatedly mentions his conquest of Magan, the name of whose king is variously written *Man-nu-da-an-nu*¹, *Ma-nu-um*², *Ma-ni-u[m?]*³. Since Magan is actually employed for Egypt in the inscriptions of Assurbanipal (seventh century)⁴ it is of course tempting to connect Manum, Manium, king of Magan, with Menes, that is if Magan actually means Egypt in the early period. Dr Albright has vigorously defended the identification in this *Journal*, vi, 89-98, where the inscriptional material, and the arguments which can be urged in favour of the thesis, are ably treated. He accepts the conclusions which are involved, namely that Menes was a contemporary of Narām-Sin, and places Narām-Sin at 2925. But when Albright wrote he was not acquainted with two dynastic tablets recently discovered by Léon Legrain⁵. It is now certain that Narām-Sin is to be placed more than 100 years later; consequently Menes would be brought down to the twenty-eighth century, which even on grounds of the imperfectly documented Egyptian chronology is wholly impossible. But if Albright's suggestion as to the connection of Narām-Sin and Menes must be given up, there remain still more interesting suggestions regarding Magan and its place in the history of Egypt and Babylonia.

The French "Expédition en Mésopotamie," conducted by Oppert and Fresnel more than fifty years ago, secured an alabaster (?) vase which was afterwards lost in a shipwreck. Oppert's copy, published in Vol. I of the *Inscriptions of Western Asia* edited by Rawlinson, reads, "Narām-Sin, king of the four regions, a vase the booty of Magan(*ki*)."⁶ A duplicate has been found at Susa⁷, and a fragment in London probably carries the same inscription⁸. These duplicates are of alabaster, consequently Magan was supposed to be a land where alabaster was known and worked. On the diorite statue from Susa, Narām-Sin claims to have conquered Magan and to have seized with his hand⁹ Manium *lord of Magan*. He then mined diorite¹⁰ in the mountains of Magan and brought it to his capital Agade. The texts make it clear both in Sumerian and Semitic that Manium was actually captured by Narām-Sin, which renders very improbable the identification of him with a dynastic king of Egypt. The problem of the localization of "Magan," as employed during the various periods, is

¹ KING, *Chronicles of Early Babylonian Kings*, II, 10, 4. ² BOISSIER, *Revue d'Assyriologie*, 16, 41.

³ Diorite statue from Susa, *Délégation en Perse*, VI, Pl. I, col. II, 4. Here he is called "lord"; but Thureau-Dangin in KING, *History of Sumer and Akkad*, 241, n. 2, says that the last sign is not *um* but possibly *dan*. The photograph certainly favors *um*, as does the Assyrian Omen Tablet, KING, *Chronicles*, II, 39, 18 = 137, 18, and this reading is defended by the name of the land *Ma-ni-um-(ki)*, from which a certain Bašam is said to have come in the time of Dungi (*Rev. d'Assyr.*, IX, Pl. I, No. 12). The tablet, in mentioning Bašam as a "Man from Manium(*ki*)," probably refers to an inhabitant of a city in Magan who was then resident in Sumer.

⁴ The evidence for Magan = Egypt, and Meluhha = Ethiopia in the inscriptions of Assurbanipal is convincing, see STRECK, *Assurbanipal*, III, 794.

⁵ The first of the two tablets discovered by Legrain is published in the *Museum Journal*, Philadelphia, 1920, XI, 175-180. The second tablet, which completes Rev. I and the reigns of the kings of Agade, was communicated to me privately in April 1921. The gap between Ur-Engur and Tirikān at the end of the Gutium dynasty occurs at the end of Rev. III, and this gap can have contained only the short Fifth Dynasty of Erech, with about three kings, as we know from the totals on Poebel's dynastic lists (No. 2). The material reconstruction of the Legrain tablet allows for the restoration of not more than three kings, for whom I assume 50 years. Starting with 2474 (Ur-Engur), we have 2474 + 50 (Erech) + 125 (Gutium) + 26 (Erech) + 39 (last six kings of Agade) = 2714, to end of the reign of Shargalisharri (25 years). Thus the beginning and the end of the reign of Narām-Sin are fixed at 2795 and 2739.

⁶ *Délégation en Perse*, IV, 1.

⁷ KING in *Cuneiform Tablets*, 32, Pl. 8.

⁸ Sumerian *zu-dug*, which is correctly rendered in the Omen Tablet by *bat-su il-lud*.

⁹ *Abū e-ni-im ibulamma*, see POEBEL, *Historical and Grammatical Texts*, IV, 296.

perplexing. Dr Albright has put forward with ability the arguments which can be adduced for its identification with Egypt in all periods. The grammatical syllabaries contain Sumerian and Semitic words for objects which came from Magan. These points are recapitulated here. The Egyptian word for "reed," *gš*, was borrowed by the Sumerians and written *gi-zi* and *gi-i(?)-zi*¹, which then became *kis* in Babylonian and explained by *kan maggan*, i.e. "the word for *kanû* in Magan²." This proves beyond possibility of doubt that Magan was applied to Egypt in Sumer and Accad when the syllabary was written. The Sumerians knew a species of pig called *makkandû*, or Maganite pig³, which seems to indicate Egypt rather than any part of Arabia.

It is, however, certain that Magan was not properly employed for Egypt, but for a land on the shores of the Persian Gulf, probably modern El-Hasa. Throughout the Sumerian inscriptions Magan is associated with Dilmun, the eastern coast of the Red Sea, and with Meluhha. Now Meluhha probably means Ethiopia in the El-Amarna Letters, as it clearly does in the inscriptions of Assurbanipal. But it is equally clear that it was not originally employed for any part of Africa. Sargon of Assyria, at the end of the eighth century, in a geographical description of the various parts of his empire⁴, says that it was 120 hour-marches (*bîru*) from the reservoir of the Euphrates to the border of Meluhha *along the sea coast*⁵. The inscriptions of the same king describe Dilmun as a land 30 hour-marches from the head of the Persian Gulf. At any rate the point of departure for these measurements is presumably near the mouths of the Tigris and Euphrates, in those days at least 20 miles inland from the present coastline⁶. The border of Meluhha was reached by a journey of 400 miles from about the 31st parallel of latitude, which brings the traveller only a little more than half-way to Oman. Moreover this same Assyrian geographical survey of the eighth century alludes to the lands beyond the Upper Sea, i.e. Asia Minor, and "Dilmun and Ma-gân-na(ki), the lands beyond the Lower Sea," that is the provinces on the Persian Gulf⁷. The use of *balri tamti šapleti* in the historical inscriptions is fully determined; it cannot possibly refer to Egypt, over 3000 miles away by sea-route. A legend of Narâm-Sin refers to his conquest of Dilmun, Ma-gan-na and Meluhha with their seventeen kings and 90,000 soldiers⁸. When the syllabaries refer to species of dates from these lands the order is "dates of Dilmun, Magan, Meluhha"⁹, and Magan precedes Meluhha in similar lists¹⁰. Ships from these lands

¹ Not the papyrus reed but the ordinary reed, corresponding to Sumerian *gin, gan*, loan-word *kanû*. See BUDGE, *Dictionary of Egyptian Hieroglyphics*, p. 804. Mr Griffith tells me that *gš* is never used for papyrus.

² II, R. 24 a, 27 should have an obliterated sign between *gi* and *zi*. My copy has a faint resemblance to *i* or *iz*. Cf. v, R. 32, 64; UNGER, *Zeitschr. f. Assyriol.*, xxxi, 262.

³ Not "Egyptian reed," which would be *kanû makkandû*.

⁴ *Cuneiform Tablets of the British Museum*, 14, 1, II, 28.

⁵ SCHROEDER, *Keilschrifttexte verschiedenen Inhalts*, No. 92.

⁶ 120 *bîru* *ši-id-du ištû KUN* = *Puratti adi pāt mē Me-luh-ha*. For *KUN*, "reservoir," see *Bab. Exped. Pennsylv.*, 31, 15 and *Zeitsch. d. Deutsch. Morgenl. Ges.*, LXIX, 502. The reservoir of a canal is opposed to its *KA*, mouth, or upper head, hence the reservoir of the Euphrates was somewhere near its mouth, and was constructed to irrigate the region near the sea-coast; the use of *šiddu*, coast, coast line, border, district, probably indicates that the distance is measured along the sea coast.

⁷ See, for the location of Dilmun, *Poème Sumérien du Paradis*, 6-10.

⁸ Note also that the mountain Magan in the Sumerian epic of Ninurta, IV, R. 13 a, 16 is opposed to *māti eliti*.

⁹ KING, *Cuneiform Tablets*, xv, 44.

¹⁰ AO. 2131, Obv. 6-10, in *Revue Assyriologique*, VI.

¹¹ *Assyr. Lesest.*, 86, II, 23 = *Am. Journ. Sem. Lang.*, xxxiv, 62; LANGDON, *Publ. Bab. Sect., Philadelphia*, XII, 26 (from Isin period) has only Magan.

are listed in the order, "a Dilmun ship, a Magan ship, a Meluhha ship¹." It is therefore inferred that Magan lay between Sumer and Meluhha.

Now these three lands are deeply rooted in Sumerian tradition and religion. Dilmun east of the Gulf was the traditional land of Paradise and the seat of some of the oldest Sumerian gods; and the Epic of Paradise, which represents the legend of the oldest inhabited Sumerian lands, mentions Magan and its deity Nindulla, the protectress of fountains². A fragment of a similar Sumerian poem on the origins of civilization mentions Dilmun, Magan and Meluhha together³. It is incredible that the Sumerian theologians and poets should have regarded Egypt and Ethiopia and their gods in the same way as they did the lands and gods of Sumer itself. These three lands were associated with Sumer from the prehistoric period, and were centres of the oldest Sumerian civilization. In the period of Ur, in a temple account of Lagaš, there is mention of one *Ur-Isir galu Má-gān-na*, "Ur-Isir, a man of Magan⁴," and his name is Sumerian. A record from the state archives of the same period contains entries of provisions of wine, bread and butter⁵ for messengers travelling to various lands: one goes to Ga-eš, a well-known city in Sumer or Accad, one to Magan and one to Anšan in Elam. Now the provisions for these messengers are all about the same in quantity; from this it may be inferred that the journey to Magan was about equal to the distance to Anšan. Egypt is not to be thought of in this connection.

Magan meant in all probability the fertile date country in the region of classical Gerra, modern El-Hasa, and Meluhha began shortly beyond Bahrein and included Oman. When were these old terms so abused as to refer to lands two and three thousand miles away and on another continent? They never really lost their traditional meaning down to the latest Assyrian and Babylonian times, but they were so abused, there is no possible doubt about it, and this is the *crux* of the whole problem. Sumer was in touch with Egypt and Ethiopia by sea-route, or by Syria and the Delta, from the most remote times. There was intimate contact in the age of the Sargonids of Agade; but Ethiopia was referred to as Meluhha and West Arabia (including Sinai) as Magan only at a much later period.

It is, however, extremely probable that Dilmun, Magan and Meluhha, with their seventeen kings, in the legend of Sargon, mean nothing more than the lands east and west of the Persian Gulf. Manium—Manum—Mannu-dannu, king of Magan, cannot possibly be referred to Egypt. His real name appears to have been Ma-ni-um; two centuries after Narām-Sin his fame in Magan was perpetuated in the name of a city or land *Ma-ni-um*⁶, and a certain Bašam, a man of *Ma-ni-um-(ki)*, sent sacrifices to the national Sumerian cult of Sumer. If his real name be *Mannu-dannu*, as Sayce maintains, and not "Mannu the mighty," as Assyriologists usually translate, then he is a Semite, and Magan would here refer to the rich province of Yemen. The problem as to why Magan was renowned for its diorite, or its copper, or how Manium obtained his alabaster vases, should not distort our interpretation of the obvious facts. There is also the famous *mes* wood of Magan, the *musukkanu* of the Assyrians and Babylonians, which Haupt and Albright strenuously assert to be the Egyptian Acacia. But the acacia is a characteristic tree of the hills along the whole coast-line of Oman and the Hasa. These are troublesome points in a larger issue, and the situation is not entirely clear. But Magan is certainly not Egypt in the inscriptions of

¹ *Assyr. Lesest.*, 88, v, 5-7.

² LANGDON, in *Publ. Bab. Sect., Philadelphia*, x, 112.

³ *Šamnu*, oil, but also grease.

⁴ *Poème du Paradis*, 208, 44.

⁵ NIES, *Ur Dynasty Tablets*, 58, iv, 133.

⁶ *Revue Assyriologique*, ix, Pl. I, No. 12.

Narām-Sin, and it is equally certain that Egyptian products reached Sumer by the sea lands of Meluhha, Dilmun and Magan from the very earliest times¹.

The period from Menes to Kha^csekhmui and Zoser² having been established within somewhat secure limits, it is possible to discuss more lucidly the remarkable evidence of Sumerian and Elamitic influence upon early Egypt. The discussion concerning Magan and Meluhha has cleared up at least one important point: early Sumerian culture reached Egypt by way of Oman and the Red Sea. I am not capable of expressing an opinion between the claims of priority in the origins of Egyptian civilization held by those Egyptologists who seek for them in the Delta and those who defend the claims of Upper Egypt. But the fact remains that the antiquities in the region of Nekhen, the old capital of the Southern Kingdom, are those which claim first consideration. As a result of my investigations Menes lived about half a century before Ur-Ninā. Udmu-Usaphais and 'Azab-Miebis would thus be contemporaries of the great *patesis* of Lagaš, Eannatum and Entemena, who lived in the period of the Fourth Dynasty of Kish, while Narmer and the "Scorpion" king³ would be contemporary with the kingdom of Ma-er, 3268—3188. The ivory knife-handle from Gebel el-'Araḳ⁴, near Coptos, belongs by general consent to a period considerably before Narmer, and may be of about the period of Mesilim and the third kingdom of Kish (3638—3488), from which period there are some Sumerian monuments and seals. The most striking similarity with Sumer on this knife-handle is the scene at the top of one side, a bearded

man restraining two powerful lions, a scene which at once reminded Bénédict, Petrie and L. W. King of the familiar struggle of the hero Gilgamesh on Sumerian seals of all periods. Bénédict, on this supposed identification, even connected the figure with the Egyptian satyr Bes. But the hero with the lions on the Egyptian knife-handle is not Gilgamesh. His clothing is identical with the prehistoric Sumerian skirt, which consists of nothing but a plain woollen cloth put round the waist and overlapped at the front, being fastened at the waist by a girdle. This costume is characteristic of the earliest Sumerian monuments; see the reproductions of the Lagaš stone tablet, the so-called *Figure aux Plumes* (Fig. 2), of about 3700 B.C., and of a seal of the same period in



Fig. 2. The *Figure aux Plumes*.

Delaporte's Catalogue of the cylinder seals in the Bibliothèque Nationale. It is not permissible to identify the figure on the knife-handle with Gilgamesh, the demigod of Erech, who fought with a legendary bull created by Ishtar to slay the hero who had rejected her love. Gilgamesh is always represented naked, wearing nothing but a band at the waist with tassels hanging from the hip. The Egyptian scene reproduces the familiar

¹ For the minerals and flora of South Arabia the reader is referred to the German edition of Wellsted's *Travels in Arabia*, mentioned by Kmosko in *Zeitschr. f. Assyriologie*, xxxi, 63, and to ELISÉE RECLUS, *Nouvelle Géographie Universelle*, ix. Ritler's *Erdkunde* is not helpful on Arabia Felix.

² For the length of the First and Second Dynasties I depend upon the consensus of Egyptological opinion as expressed by Sethe, Breasted, Meyer, Hall and Newberry.

³ I accept the consensus of opinion regarding the period of these unidentified kings who are said to have immediately preceded Menes. Narmer is identified with Menes by some Egyptologists, and even the Scorpion king has been identified with Narmer.

⁴ Reproduced by Petrie in *Ancient Egypt*, 1917, 26 foll., with full discussion and literature after Bénédict. See also KING, *Legends of Babylonia and Egypt*, 7.

Sumerian drawing of a hunter struggling with one or two lions. The dress and the figures of the lions are pure Sumerian and indicate an age below which it is not possible to descend in Sumerian chronology. The form of the skirt worn by the hunter on the knife-handle disappears in Sumerian art before 3600. Other designs on the knife-handle are unmistakably Sumerian. I should like also to point out the similar scene on the walls of a pre-historic brick walled tomb discovered by Quibell and Green at Hierakonpolis; the figure between the lions in these very primitive paintings is very similar to the Gilgamesh design.

Again, very noticeable on the knife-handle is the pose of the two dogs gazing upwards toward their master in conflict with the lions and below the lion pursuing and devouring a bull. The two dogs recall at once the early seals representing Etana the shepherd ascending to heaven, with two dogs gazing upward toward their master; see Fig. 3. The decorative

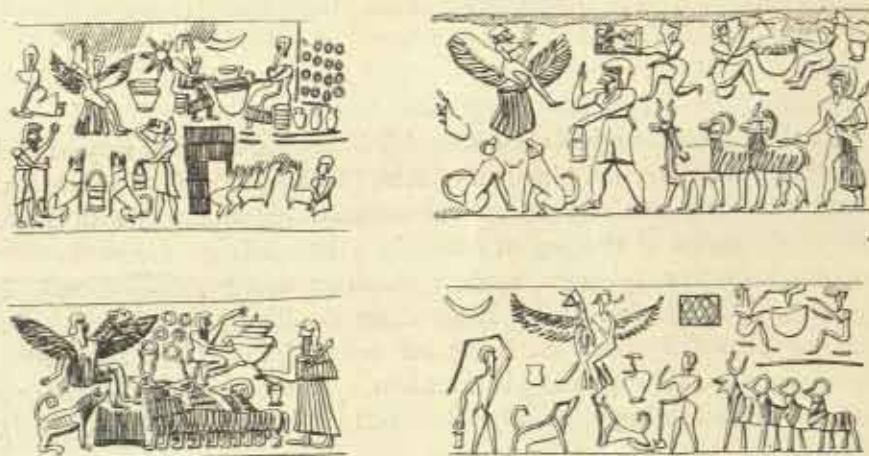


Fig. 3. Seals of Etana.

motif of a wild animal of prey pursuing a domestic animal or another wild animal is characteristic of Sumerian art and of pre-dynastic Egypt. Decoration consisting of animals in file is also characteristic of Sumero-Elamitic art and of pre-dynastic Egyptian work. This similarity has been noticed and dealt with by Petrie and Bénédite, and Prof. Rostovtzeff has repeatedly referred to it in private conversation with me. Material for comparison on this point is so abundant that it is difficult to select examples; but I may refer here to the Egyptian Ivory Comb formerly in the Davis Collection¹ and to three Elamitic and Sumerian seals of the same period²; for the latter, see Pl. XXII, Figs. 2, 5, 6. There is one other *motif* in early Egyptian art to whose Sumerian origin I shall call attention before leaving this aspect of the subject. On the slate palette of the Louvre are depicted two giraffes facing a tree *vis-à-vis*, a decorative *motif* which seems to have been fairly common in early Egypt as late as the First Dynasty. Similar designs occur in Sumerian art from the most primitive stage and in all periods. I have selected for comparison a seal of Elam³ from a period about contemporary with Menes. The scene depicts two goats *vis-à-vis*, and a pine-tree growing upon a mountain; see Pl. XXII, Fig. 7, and *cf.* also *ibid.*, Fig. 1⁴.

In conclusion I shall draw attention to the most important fact which emerges from the

¹ *Journal*, v, Pl. XXXIII.

² DELAPORTE, *op. cit.*, 46, says that S. 323 may be as late as the period of Agade, which is extremely improbable.

³ DELAPORTE, *op. cit.*, S. 254.

⁴ A Sumerian seal, taken from W. H. WARD, *Cylinders of the Morgan Library*, 145.



1. Early Sumerian Seal



2. Early Sumerian Seal



3. Early Sumerian Seal



4. Seal of Ibni-sharri



5. Early Elamitic Seal



6. Early Elamitic Seal



7. Early Elamitic Seal

THE EARLY CHRONOLOGY OF SUMER AND EGYPT (II)

comparison of the early archaeology of these countries. If the prehistoric tomb-paintings faithfully represent the physical appearance of the first inhabitants of the Nile valley, there can be no doubt concerning the racial connection of these with the Sumerians and the prehistoric Elamites of the age of the thin geometrical pottery. The bird-like heads of the human figures in the tombs of Hierakonpolis are practically identical with the representation of the heads of Sumerians on seal-cylinders and bas-reliefs of the early period. The long bird-like nose is only an exaggeration of one of the most salient features of the two peoples. The Sumerian was dolichocephalous, having a high thin straight nose which joined the cranium without depression. The forehead slants backward almost on a line with the nose, exactly as in the primitive heads of the Egyptian tomb-paintings. Sumerian and Elamite shaved both face and head at a very early period, but there are early representations of these peoples before the beard had been wholly removed, as on some of the faces of the Hierakonpolis tombs. Perhaps the most interesting feature of the Sumerian was the peculiar character of the eye, which is probably a trifle exaggerated in early statuettes. A line drawn from the inner corner of the eye-socket to the outer corner is not horizontal but slants slightly downward. I am unable to determine from the tomb-paintings of Hierakonpolis whether this is really true of these primitive Egyptians. It certainly occurs on some of the limestone and ivory heads of Hierakonpolis of the pre-dynastic period, but these are said to be Negro-Libyan or pure Libyan, and their general features are entirely different from those of the primitive tombs.

It may be fatuous to compare the "pottery marks" of Abydos with the early Sumerian ideographs, but there are a few signs whose similarity with the latter is astounding. In making my suggestions I shall refer to PETRIE, *The Royal Tombs of the First Dynasty*, 1, Pls. XLVIII—LVIII¹. If these comparisons are justified they point to the Egyptian marks being a survival from a very early period when Sumerian linear writing was known in Egypt; in any case they will prove that linear writing was also the earliest style in Egypt. If the Sumerians ever possessed realistic pictographs they were changed to the linear style, under the influence of the geometrical pottery decoration, before the age of the written monuments. PETRIE, 376, 346, 357, etc., resembles the earliest sign *A*, water, REC 470². The pictograms for fish, bird and serpent are naturally similar, as they are bound to be, but the detailed similarity of the serpent PETRIE, 429 with the early sign *MUS*, REC 158, is hardly an accident, the two forks of the tail being peculiar to the oldest Sumerian pictograph³. PETRIE, 261 is probably the unidentified sign on the prehistoric Philadelphia tablet II, case 3, end⁴. PETRIE, 548, 540, etc. is identical with the sign *NIM*, two-winged insect, fly, REC 165. The most extraordinary coincidence is PETRIE, 608, 665, 666, etc., identical with the compound *SU + AN*, i.e. *EN*, REC 258 the Sumerian ideogram for "curse." This is not a pictograph but expresses the idea "suppression of god," the curse of a demon which expels a man's god from his body; the sign for "god" is written with a star in Sumerian. This can hardly be an accident. PETRIE, 617 (at left)

¹ Petrie, *op. cit.*, I, 29 foll., II, 47, identifies some of these markings with the Egyptian hieroglyphs. The sign which Petrie identifies with a hoe and calls *mer* is astonishingly like the Sumerian linear sign *NIM*, *Rech. a. l'Écrit. cunéif.*, 165, a two-winged insect. The sign for *mer* is supposed to represent a hoe in Egyptian. Dr Gardiner assures me that the pre-dynastic Egyptian linear signs have no connection at all with the origin of the hieroglyphs.

² "REC" = THUREAU-DANGIN, *Recherches sur l'Origine de l'Écriture Cunéiforme*.

³ See the primitive sign on the early Sumerian tablet, BARTON in *Publ. Bab. Sect., Philadelphia*, IX, No. 2, col. VII, 5. Petrie says that it represents two serpents.

⁴ BARTON, *ibid.*, No. 1.

has a great resemblance to the Sumerian *GIR*, scorpion, REC 4¹. PETRIE, 632, 635 is in any case the sign which occurs on an early tablet, CT 32, 7, right edge, l. 3, probably *AZAG*, gold; see also *Orient. Litt.-Zeitung*, 1913, 8 and REC 252. PETRIE, 700, 1165, 1169, etc. is identical with the sign *SIG*, fleece, wool, hair, REC 464. The resemblance of PETRIE, 779 to the sign *GAN*, field, is unmistakable. PETRIE, 833 is most certainly the Sumerian *MUS-LANU*, serpent twining on a pole, the ordinary pictograph for the mother goddess Innini, REC 294 and *Proc. Soc. Bibl. Arch.* 1914, 281. The sign is also used for bright, pure, excellent appearance. The sign later took on a form precisely similar to PETRIE, 864, 862, etc.

































Sumerian Linear Signs	Early Egyptian Linear Signs
1  <i>ka</i>	
2  <i>f</i>	
3  Water <i>su</i>	 Petrie "two serpents"?
4  Serpent <i>mus</i>	
5  Woven material. <i>su</i>	 mat? cf. Sum.  , wool, fleece
6  Water jar with spout	 Not identified same sign?
7  Sign for gold. <i>azag</i>	 Not identified same sign?
8  Sign for field	 Not identified same sign?  ?
9  Sign for Phoenician goddess later 	 Not identified same sign?  Same sign as 8?
10  Chamber, square block a measure 14 pints	 Chamber on pottery same sign?
11  One sixth <i>su</i>	 One sixth of a measure?
12  Incantation Curse. <i>en</i>	
13  Fly Two-winged insect.	 Petrie a bee. <i>mer</i>
14  Branch. Scepter <i>pa</i>	 Not identified same sign?

Fig. 4. Table of Pottery Markings and Sumerian Equivalents.

See HILPRECHT, *Old Babylonian Inscriptions*, No. 94. The square or rectangle which occurs so frequently as a mark on the Egyptian pottery is identical with the sign *NIGIN*, which has a large number of meanings, such as chamber, to enclose, surround, and the name of a vessel which measured 10 *ka* or about 14 pints². It is remarkable that this sign occurs so often on the pottery. PETRIE, 1371, 1373, etc. is the sign *NUN*, prince, REC 43³.

I have selected for the above list only those marks the forms of which are undoubtedly

¹ See ALLOTTE DE LA FUÏE, *Documents Pre-Sargoniques*, 410, col. IV.

² In Sumerian the sign for a measure is *NIGIN* doubled.

³ This comparison is not quite precise, but see the form of *NUN* in BARTON in *Publ. Bab. Sect. Philadelphia*, IX, No. 2, col. III, 9.

similar to the early Sumerian pictographs. If the markings on the Egyptian pottery be really survivals of the old Sumerian writing they are survivals from a period at least four or five centuries before Menes. I am not able to express any opinion about the age of Egyptian pottery from its archaeological aspect. But the total dissimilarity of the ordinary Egyptian hieroglyphs as they appear shortly before Menes, and the Sumerian linear pictographs, cannot be easily explained, in view of the unlimited evidence as to Sumero-Egyptian cultural origins. Sumerian writing was well developed in the period of the Third Kingdom of Kish, 3638—3488 (*circa* period of Mesilim), and the numerous Sumerian contributions to Egypt such as the cylinder seal, the mace head, the decorative designs, the thin geometrical pottery of Elam, certainly occurred about that time. It is the period to which the forms of the pottery markings must be referred if these really belong to the Sumerian system of linear writing. In that case writing accompanied the art of the period into Egypt about 4000 B.C., as is to be expected. It perished and was lost along with the Sumero-Elamitic civilization which preceded the later African and Semitic culture, not, however, without contributing lasting elements to Egyptian origins. The early Egyptians were displaced by a people or an amalgamation of peoples whose genius for art far surpassed anything which Sumer and Elam can provide. The Assyriologist can go no further in the discussion of the origins of the wonderful civilization of Egypt. Sumerian and Elamitic influence ceases early in the First Dynasty, and even here it is only a survival. As an Assyriologist who understands but little of the complex problem of the new native culture which now arose in Egypt, I can only express the hope that the racial problem will be explained. The true Egyptian culture which replaced the prehistoric Asiatic is to us an achievement of unsurpassed excellence.

In conclusion it should be stated that the evidence for the identification of Magan with Egypt before 700 B.C. is about *nil*. It dwindles down in fact to two entries in syllabaries, the name for "reed" in Magan and the "pig of Magan." These syllabaries, written in the seventh century B.C., are copies of originals dating from about 2300; but the late syllabaries frequently insert new words. By comparing copies of the older period with those of the Assurbanipal library one finds numerous examples of this practice. Let us compare, for example, the early copy of a part of *ĦAR-RA* = *ĥubullu* in my *Sumerian Grammatical Texts*, 24 foll. with the copy from the Kouyunjik Collection published by Delitzsch, *Assyr. Lesest.*, 86. Note that Ni. 4598 does not, after l. 16 = K. 4338a, II, 7, have the late insertion *gu-gu-za ġarran Nim-ma-ki* = [*pal-ti-gu*, see *Am. Journ. Sem. Lang.*, XXXIV, 62], i.e., the word for "chair" in Elamitic is inserted in the late text. Ni. 4598, 20 *gu-gu-za lugal*, "a chair for a king," is omitted on K. 4338a II after l. 19. Ni. 4598, 23 = K. 4338a II, 22 has *gu-gu-za = ma-ak-ka-nu-u* (*Am. Journ. Sem. Lang.* XXXIV, 62) after which the late text inserts *gu-gu-za Me-luġ-ġa = me-luġ-ġu-u*, "a chair of Meluhġa." It is to be noted also that both early and late syllabaries then mention "a sailor's chair," *gu-gu-za mā-lāġ = ša ma-luġ-ġi*, see *Am. Journ. Sem. Lang.*, XXXIV, 62, which again connects Magan with a sea-faring people. K. 4338a has a large number of insertions in col. II before l. 53, see my note *op. cit.*, p. 26, n. 11, and see p. 27, n. 2 for two more late insertions, p. 28, n. 3 etc. When Haupt and Albright argue for the identification of Magan with Egypt on the basis of these late syllabaries the evidence is quite unsatisfactory until the original can be supplied. When a syllabary of the seventh century states that the word for reed in Magan is *gi-zi* = *kis*, the Egyptian *gš*, it is highly probable that the scribe is speaking in terms of the late period. The evidence for Magan = Egypt before the seventh century thus vanishes absolutely, and the evidence that it was a province on the Persian Gulf even in the eighth century is positive and irrefutable.

Another fallacy in the chronological argument should be pointed out. In order to raise the date of Narām-Sin to a century to which Menes could be brought down by ingenious argument, the whole dynasty of Adab is inserted before Ur-Engur. Lugalannamundu and the other kings of Adab are placed, on the dynastic tablet discovered by Legrain, four dynasties before Sargon and seven dynasties before the period to which Dr Albright assigns them. The entire theory disappears, in whichever way the problem is looked at. As to the identification of the *mes* wood of Magan, the Assyrian *musukkanu*, and the Hebrew *m'sukkan* "which rots not" (Is. xl. 20) with the Egyptian acacia, the assumption may be true, but this word also is late, very late in cuneiform texts. The inscriptions of the Neo-Babylonian Empire call it the "everlasting wood" which points rather to a cedar, and it is actually listed with cedars in the botanical list, *Mitt. Vorderas. Ges.*, 1913, 2, p. 21, ll. 28-41 foll. The historical inscriptions repeatedly mention the Magan wood with *erinu*, cedar. RITTER, *Erdkunde*, XI, 544 says that the *Ficus sycomorus* was proof against worms and used for mummy coffins, but Mr Griffith tells me that the imperishable part of the coffin, that is the lining, is a cedar imported from Palestine and Syria.

The argument for the identification of Magan with Sinai from the fact that it was a mountain of copper rests upon a late syllabary and is weakened by the fact that copper is found in the Gebel Akhdar of Oman¹. The *santu*-stone, Sumerian *gug*-stone, is as yet unidentified. Both the Sumerian and Semitic words mean red, glistening, and consequently Thureau-Dangin² has identified it with a carnelian. Since the syllabaries repeatedly state that it came from Meluhha, and Gudea states that he obtained *gug-girin* or the brilliant *gug*-stone from Meluhha, Jensen, on the erroneous supposition that Meluhha originally meant Ethiopia, first suggested malachite³ and afterwards porphyry⁴. Haupt, also misled by the same geographical argument, argued for the meaning electrum⁵ and connected *santu* with Hebrew *šoham*, Aramaic *sāma*, *simā*, Egyptian *u-s-m*, and Greek *ἄσπερος*. There is great probability in the identification, which has been entered for some time in the Hebrew lexicons, of *santu* with *šoham*, but the versions of the Hebrew texts suggest onyx and *sardius*, and Aramaic *sēma*, *sīma*, *sāmā* are ordinarily supposed to be crude silver. Electrum is brown, yellow or amber, and only *sardius* agrees with *santu* (red, brilliant) in colour. It is not permissible to argue for a stone from Ethiopia or Egypt, for the cuneiform texts definitely annul the argument, and the only possible means of discovering what *gug* or *santu* stone means is to find out more than we now know concerning the precious stones of south-eastern Arabia, or to find a monument with this word written on it in such a way that the word names the material of the monument itself. Gudea brought mineral gold from Meluhha, and in the same connection he mentions Gubin. Jensen, on the evidence of Ptolemaic inscriptions, argued that *Kpny* is to be located in Punt⁶, but Mr Griffith tells me that this location is not indicated in Ptolemaic inscriptions, which anyhow are of little value in view of the undoubted identification *Kpny* with Gebel-Byblos as late as 1000 B.C. The gold of Meluhha is certainly difficult to explain; in fact it cannot be explained. But Meluhha and Magan

¹ See the map of WELLSTED'S *Travels in Arabia* at the end of Rödiger's edition, and *op. cit.*, 82. The mines are found near Kotha just south of the Gebel Akhdar, a heavily wooded range.

² *Huitième Campagne de Sargon*, 52, n. 4.

³ *Zeitschr. f. Assyriol.*, x, 372.

⁴ *Keilinschr. Bibl.*, vi, 570.

⁵ *Or. Litt.-Zeit.*, 1913, 489.

⁶ I fail to understand how *santu* can be connected with Egyptian *mfkt*, "malachite," as suggested by Albright in *Journal*, vii, 4; vi, 90. Moreover there is no word *u-s-m* in Egyptian; it has been misread for *d'm*, which means gold, see Gardiner in *Zeitschr. f. äg. Spr.*, xli, 73 foll.

⁷ *Zeitschr. f. Assyriol.*, x, 360.

were clearly wealthy trading provinces on the south-east Arabian sea-coast, and the products of Egypt and Ethiopia may have reached Sumer through them.

The chronological and geographical issues are so important for the history of Egypt and Sumer that I believe a table of the dynasties of Sumer and Accad will prove useful to scholars. The new dynastic tablets discovered by Legrain complete the dynastic lists, and it is not likely that I have erred on the side of exaggerating the only lacuna, the length of which certainly falls between fifty and one hundred years¹.

COMPARATIVE CHRONOLOGICAL TABLE OF THE KINGDOMS OF
BABYLONIA AND EGYPT.

Reigning Dynasty					Reigning Dynasty				
KISH. First Dynasty	...	...	...	5000 ² ?	ERECH. First Dynasty	...	...	...	5000?
.....bu-um	...	...	...	?	Meskingašer	...	...	...	325
.....tabba	...	...	...	780 +	Enmerkar	...	...	...	420
Galumum	...	...	...	900	Lugalbanda	...	...	...	1200
Zuḫakīpu (Scorpion)	...	...	...	840	Tammuz	...	...	...	100
Arpū...	...	...	...	720	Gilgamish	...	...	...	126
Etana	...	...	...	635	.....lugal	...	...	...	?
Balīḫ	...	...	...	410	Total about 11 kings. These reigns are semi-historical and the dynasty is probably contemporary with that of Kish.				
Enmenunna	...	...	...	611					
Melam-Kish	...	...	...	900					
Barsalnunna	...	...	...	1200					
Mesgagud...	...	...	...	?		
About 21 kings. Semi-historical. They probably reigned before the kingdoms were united.									
UR. First Dynasty	...	...	...	4216					
Mesannipadda	...	...	...	80					
Meskenagnunna	...	...	...	30					
Elulu	...	...	...	25					
Balulu	...	...	...	36					
Total 4 kings									
			Total	171					
AWAN	...	...	...	4045					
Three kings									
			Total	356 ³					
UR. Second Dynasty	...	...	...	3945					
Four kings									
			Total	108					
KISH. Second Dynasty	...	...	...	3837					
Six kings. The total length of the dynasty is 3792 (!) on the Legrain tablet									
			Total	192?	Invention of writing. Geometrical pottery in Elam. Geometrical line decoration influenced the pictographs and they also became linear. Since geometrical pottery is older than the realistic polychrome pottery this proves that the geometrical pottery was made before 3750, date of the earliest linear writing.				
HAMAZI	...	...	...	3645					
.....ni-iš	...	...	...	7					
One king									

¹ The details upon which this list is based are discussed in the *Expository Times* for June, 1921.

² Dates B.C. are given in thick type, lengths of reigns and dynasties in ordinary type.

³ Reduced to 100 in my reckoning.

Reigning Dynasty				Viceroy of Lagas	Egypt
KISH. Third Dynasty	...	...	3638		Mace head with animal file decoration in Sumer and Egypt
Mesilim	...	...	?	Lugal-	Pictographs already linear, as seen on monuments of Mesilim and pottery marks of Egypt
Urazagad	...	...	?	Sagengur	
Lugal-tarsi	...	...	?	Ninkisalsi	
Lugal...aga	...	...	?	at Adab	
Enbi-Ashdar	...	...	?
Total 6 kings		Total	150 ?		
ERECH. Second Dynasty	...	...	3488		Cylinder seal now in use in Sumer, Elam and Egypt
En-sag-kusanna	...	...	?
Lugal-kigubnidudu	...	...	?
Lugal-kisalsi	...	...	?
About 4 kings		Total	130 ?		
ADAB	...	...	3358		
Lugalannamundu	...	...	?
Lugal-dalu	...	...	?
Mebasi	...	...	?
Total 3 kings		Total	90		
MA-ER	...	...	3268		Nar-mer and "Scorpion" King
AN-BU	...	...	30		
.....gi	...	...	?
[]-Babbar	...	...	?
About 4 kings. Total length in dispute		Total	80		
AKŠAK (Opis)	...	...	3188	Šuruppak	MENES, circa 3200
Unzi...	...	...	30	magistrates	
Undalulu	...	...	12		
Urur...	...	...	6		
Gimil-Šagan	...	...	20	Enhegal	
Išu-el	...	...	24		
Gimil-Sin	...	...	7	UR-NINA	
Total 6 kings		Total	99		
KISH. Fourth Dynasty	...	...	3089		
Azag-Bau	...	...	?	Akurgal	
Gimil-Sin	...	...	25	Eannatum	Usaphais-Udmu
Ur-Ilbaba	...	...	?
Zimudar	...	...	30	Entemena	
Uziwadar	...	...	6		Miebis-Šazab
Elmuti	...	...	11		
Innu-Shamash	...	...	11		
Nanija	...	...	3	Urukagina	
Total 8 kings. (Dynastic tablets differ for length of first and third reigns. The total is doubtful but is arrived at by the addition on one tablet)		Total	192 ?		

Reigning Dynasty		Viceroy of Lagāš	EGYPT
ERECH. Third Dynasty	... 2897		
Lugalzaggisi	... 25		
(One king)			
AGADE. Semitic Dynasty	... 2872		
SARGON	... 55		Neterimu
Rimush	... 15		
Manishtesu	... 7	Engilsa	
NARĀM-SIN (2795)	... 56	Ur-e	
Shargalisharri (2739)	... 25	Lugalusum-	Kha'sekhemui. End of Second Dynasty,
Few months of disorder	...	gal	circa 2800
Igigi, Imi, Nani, Elululu	... 3	Ugme	
Dudu	... 21		Zoser. Third Dynasty
Gimil-Dur-Kib	... 15	Ur-Bau	
Total 12 kings		(2700)	
	Total 197		
ERECH. Fourth Dynasty	... 2675		
Urnigin	... 3	Nammahni	
Urgigir	... 6	Ur-Ninsun	
Kudda	... 6	at Lagāš	
Migir-ili	... 5		
Ur-Babbar	... 6		
Total 5 kings			
	Total 26		
GUTIUM ¹	... 2649		
Imbia	... 5		
Ingišu	... 7		
Warlagaba	... 6	Gudea at	
Iarlagāš	... 3 (?)	Lagāš	
.....		Lugalanna-	
.....-da	...	tum at	
.....-ti	...	Umma	
.....-angab	...		
Si-um	...		
(a) Lasirab	...		
(b) Erridupisair	...		
(c) Arlagan	...		
(d) Saratigubisin (?)	...		
Tirikān	...		
Total 21 kings			
	Total 125		
ERECH. Fifth Dynasty	... 2524		
Utubegal	...		
.....			
Total three kings ²			
	Total 50 (?)		
UR. Third Dynasty	... 2474		

¹ The length and number of kings of this dynasty are known, but not the order after the fourth name.

² This number is ascertained by the summary of the number of kings who reigned at Erech in all the five kingdoms of Erech, and from the length of the break on the Legrain tablet.

THE CUTTING AND PREPARATION OF TOMB-CHAPELS IN THE THEBAN NECROPOLIS

By ERNEST MACKAY

JUDGING from the large number of unfinished tombs in the Theban Necropolis, it would appear that in many cases the ancient Egyptian did not start on the work of constructing his tomb in early life, but set about it only on the signs of approaching age or perhaps the occurrence of an illness¹. There are, moreover, a great number of tombs that at a cursory glance appear to be entirely finished, but in which a closer examination will discover a great deal left undone. It is within the bounds of probability that a tomb was constructed, plastered and painted or sculptured at different periods of the owner's life, that is, the work was stopped when funds ran low and was resumed later. This surmise, if correct, would agree with the custom prevailing in Egypt at the present day in the matter of house-building, and it is supported by the fact that several of the Theban tombs have clearly been enlarged. But, be this as it may, there is proof that a great many of the tombs were hurriedly prepared for their occupants. Sculptured tombs were often left uncompleted, while other tombs have only partially cut chambers, the finished walls being plastered and painted as far as could be done in the time.

At a later period than those of the Theban tombs, if we are to trust Herodotus, an Egyptian corpse was not buried until ninety days after death. If such a custom prevailed in earlier times, it would, in the writer's opinion, have given ample time to cut and plaster the chambers and paint the scenes required in a chapel of moderate size and finish, and we actually have two good examples in the necropolis of Thebes of tombs in the process of being cut, plastered and painted all at the same time. In Tomb 229 (see Fig. 1, p. 155), the outer chamber is only partially cut, and yet a portion of one wall has been smoothly plastered over, squared and outlined in red with two figures and an elaborate table of offerings. Tomb 75 (Amenhotpe-si-se) has the end of the northern half of the outer chamber unfinished, showing both rough plastering and the rock, whereas the southern half of the chamber has been finished and its walls covered with scenes. This intensive method of finishing a tomb-chapel quickly may not, of course, have been regularly adopted, but the examples given illustrate how a tomb could be finished quickly in case of emergency.

The following pages deal with the preparation of tomb-chapels in general and explain in detail the technical side of tomb construction, which for the study of a people is just as important as the artistic side, but which for some reason has hitherto been sadly neglected.

THE CUTTING OF TOMB-CHAPELS.

During the Eighteenth and later Dynasties the following seems to have been the usual method of cutting a rock tomb. A suitable face of rock having been selected, a rough-hewn

¹ We have definite proof, however, that the tomb of Amenemhêt (No. 82) was completed long before his death. The construction of a Royal Tomb also seems to have been begun early in the Pharaoh's life.

passage was made which was continued until the pre-determined length of the tomb was reached; see Pl. XXIII, Fig. 2, where the illustration shows the beginning of such a passage, which is about two feet square. A series of secondary cuttings was then made in either side of the beginning of the passage, and at right angles to it, for what is generally known as the outer chamber. Further in, if the tomb was to be a complex one, additional chambers were then cut.

There were two methods of removing the stone when cutting the preliminary passage and these outer and inner chambers. The first was by hacking the rock away piece by piece; not at all a difficult task in the case of tombs cut in shaly rock. The tools used in cutting tombs in poor rock were simply hard stone mauls, whose cutting edges were either pointed or chisel-edged. Many such implements have been found in the débris outside tombs, and the tombs themselves bear no marks of having been cut with other tools. In the case of tombs cut in harder rock, however, chisels or adzes of bronze were used, different sized points being employed for various kinds of work. The second method, which was probably that adopted in the case of harder stone, was one which can be seen illustrated in the limestone quarries a little north of the entrance to the Valley of the Tombs of the Kings¹. Here large blocks of fairly hard stone were removed from the vertical face of the cliff by first cutting a narrow passage entirely round and above them and then splitting away the core left in the centre by means of wedges inserted in a line. This method could be perfectly well employed in cutting a tomb-chamber, as the rock could be removed in large pieces which might subsequently be used for building purposes². Also, by first cutting the long preliminary passage, the masons obtained the necessary vertical faces to work against and in the proper directions to cut out halves of the future chambers. Thus two men could hew a passage around the opposite sides of one half of an intended chamber and meet in the middle at its end. Unfortunately there are but few tombs left unfinished at this stage now to be seen in the Necropolis, for, owing to lack of room, a tomb partly cut in one period and then left would be finished and utilized in another. We have, however, in the courtyard of Tomb 86 a good example of how the rock was removed in large blocks, and an unfinished tomb (No. 229) shows the preliminary tunnel and the commencement of an outer chamber; see Fig. 1. The intended plan for the first portion of this latter tomb was a rectangular room with a roof supported by six square pillars. A long axial cutting was first made in the rock, running from east to west, and then one half of the outer chamber was commenced from the north side of the passage as a neat cutting, the exact width of the chamber from the north wall to the face of the pillars; this was done in

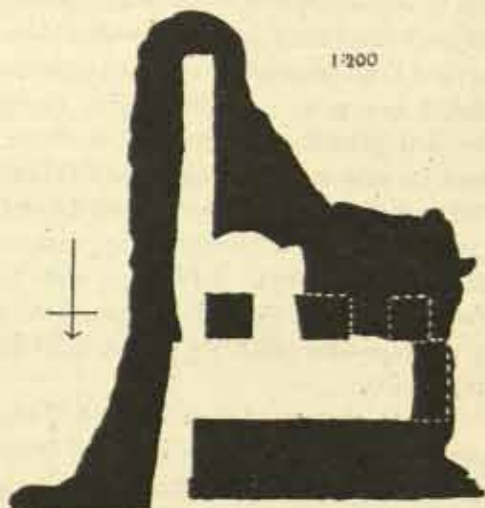


Fig. 1. Ground-plan of Tomb 229 at Thebes.

¹ These quarries all appear to be of late date, Saite and Roman.

² Stone suitable for building was doubtless as valuable in ancient times as it is at the present day in Egypt.

order to obtain a suitable face for the marking out of the two columns. The spaces between and behind the columns were then cut away, this work being done from the preliminary axial passage as well as in the cutting described above. For some reason the work was stopped at this stage, but enough was completed to show us the method of cutting out tomb-chambers with pillars. The other half of this chamber to the south of the passage was not begun, which goes to show that one half of a chamber was finished before the other half was attempted. We find corroboration of this in the inner chamber of Tomb 58, where the original tomb belonging to a man of the Eighteenth Dynasty was left partly unfinished and the tomb was taken over in both the Nineteenth and Twentieth Dynasties¹. The shrine was evidently intended to be a large room provided with four columns, but only one side with its two columns was finished, the remaining half on the other side of the preliminary passage being untouched, except for a slight cutting which was afterwards filled in, presumably by the people who took over the tomb at a later date.

In other tombs (Nos. 76, 88, 90, 115, etc.), also, we see this preliminary axial passage. Tomb 76 (Thenuna) has an unfinished inner chamber with a floor that runs upwards in rough steps or inclines, showing how the rock was removed. The walls of the southern half of the outer chamber are in two stages of preparation, namely, mud-plaster and rough stone. The northern half has been finished and decorated with painted scenes. Tomb 90 (Nebamün) is practically completed, but a rough niche at the west is really an unfinished prolongation of the first axial cutting.

In the course of tomb cutting, large flint boulders were sometimes met with. These were either removed from the wall and the holes filled up with mud and stones, or they were left *in situ* and plastered over and painted (Tombs 16, 150, etc.). In the latter case, these stones often interfered greatly with the straightness of a wall, but this could not be avoided, as flint is an impossible stone to cut even with a modern tool. Any attempt to remove such boulders was complicated by the difficulty that there was often no means of knowing how large the boulder would prove to be. Tomb 76 has a piece of a large boulder projecting from its eastern wall, which was left bare and unpainted. Flint boulders found in cutting the roof of a tomb were also left *in situ*, if of large size, and plastered over and painted, giving the roof an irregular appearance which sometimes is not unpleasing (Tombs 16, 60, 147, 169, etc.). Advantage was taken of just such an irregularity of the roof in Tomb 96B (Sennufer); it was plastered and then decorated with a very free running design of a grape-vine with its leaves, tendrils and grapes, the whole giving a most charming impression.

Great care was taken in most of the tombs to ensure the exact alignment of the axial passage by drawing a line in red or black paint upon its roof, as may be seen in Tombs 166 (Raḥmōse) and 211 (Penēb). This line was probably set out by stretching a cord against the roof down the centre of the rough passage and then marking its direction. Offshoots were measured from this line to ensure an equal width to the passage throughout. The axial line in Tomb 166 (red in colour) is painted upon a well-cut surface, but that in Tomb 211, which is black, closely follows the uneven surface of the roof, which is so very irregular as to cause the line in places to become quite vertical².

¹ The man for whom the tomb was originally cut was probably buried in it, as some of his scenes and roof decoration are to be seen in the inner chamber.

² There is a series of red crosses on the roof of the main chamber of Tomb 86, which is difficult to understand unless they were marks made by an overseer to show progress made and the rate of work.

In the Royal Tomb of Haremhab the roof line is missing, but offshoots are still to be seen marked on the walls in black paint. In this tomb, in order to ensure the perfect straightness of the walls, the strange, but none the less effective, system was adopted of making a series of small holes in the rough rock of the proper depth and touching in their bases with black. The base of each hole, which is horizontal, is exactly half the width of the finished tomb from a line stretched along the axis of the tomb. When the architect had thus completed his survey, he could safely leave the walls to the masons, as the latter had only to cut away the surrounding rock between the holes and use a straight-edge between the black marks that were then exposed on the surface.

Lines were also employed to mark out the roof of a vaulted chamber; a good example of this is to be seen in Tomb 211¹. The position of the spring of the vault having been determined, a horizontal line was first drawn around the chamber at this height. This line on the two end-walls was then divided at regular intervals by short vertical marks, from which vertical offshoots were measured upwards to fix the curve of the vault. A very fair degree of accuracy could be obtained by this method, as after the curve of the two end walls had been fixed, it was only necessary to stretch a cord between the corresponding points on the end walls to ensure the vault in the middle of the chamber being the proper height. Unfortunately, the tomb in which this method was followed was cut in very bad rock and the workmen were unable to finish it with any degree of accuracy.

Tomb 166 provides an excellent example of how the roof of a tomb cut in hard rock was levelled for plastering after it had been roughly hewn into shape. When the walls of the chamber had been trued up, a horizontal line in red paint was run along each with a large brush or rag wrapped around a stick, with the object of ensuring the correct level of the roof, offshoots being measured vertically upwards from this line. From the appearance of the line in this tomb, it was ruled by means of a long straight-edge, whose level was taken from the floor² or, more likely, fixed by means of a plumb-bob level. Such a line for adjusting the levels of roofs may be seen in many tombs in the Theban Necropolis, the best examples occurring in Tombs 63, 64, 86, 89, 91, 166, 224 and 229.

The distances of these lines from the present ceilings of some of these tombs are as follows:

Tomb	Depth of line from ceiling	Cubit	Palm	Digit
86	55½ cm.	1	0	1·7
89	57½ cm.	1	0	2·7
91	39½ cm.	0	5	1·1
166	71½ cm.	1	2	2·2
229	74½ cm.	1	3	—

It would appear from the above table that the cubit standard used was the royal one³. The digit numbers and their fractions can be explained by errors in cutting the levels of

¹ See Pl. XXIII, Fig. 1 (left, nearly half-way up). The photograph unfortunately shows only two of the vertical markings; the remainder are, however, quite clear to the eye.

² In most tombs, however, the floor seems to have been finished last. Cf. Tombs 76, 86, etc.

³ The royal cubit, the ancient unit of length, was equal to 52·310 cm. This was divided into 7 palms of 7·47285 cm. or 28 digits of 1·86821 cm. The ordinary cubit was 44·837 cm., being 6 palms instead of 7. These measurements are taken from cubits in the Museums of Liverpool, Turin and Cairo, the average of the three giving us the above standard. See HOWARD CARTER, *Report on the Tomb of Zeser-Ka-Ra* in *Journal*, III, 147-154.

the roofs, which plastering would eventually hide. Another source of inaccuracy is the occasional great thickness of the levelling lines, in consequence of which the writer had to take his measurements from their middle, whereas from the top may have been the correct distance.

On the mud-plaster of the two side-walls of the second chamber of Tomb 77 there is a white horizontal line 63 cm., or 1 cubit 1 palm and 1·7 digits, below the spring of the vaulted roof. The object of this line, which it should be noted is painted on the mud-plaster, was to secure a correct level for the plaster used to fill the crevices of the roughly cut vaulted roof; see Pl. XXIII, Fig. 5 (near the bottom).

In four tombs¹ in the hill of Sheikh 'Abd el-Kurneh, in which columns serve to support the roofs of the outer chambers, red lines are still visible down the middle of some of the columns. These lines must have been marked on vertical rock faces to show the masons where the columns were to be cut; to fix the width of a column all that was required was to measure with a rod on each side of such a line. This system of marking out the position and dimensions of columns was doubtless employed in nearly all the tombs, but in most cases the guiding lines have been covered over with plaster and thus lost to view; see, however, Pl. XXIII, Fig. 4, from Tomb 229².

Red lines were also employed to delimit architectural features in Tombs 87, 228 and 229. In the first tomb a line is seen on the soffit of the door leading into the second chamber, together with a vertical line in the middle of the frame on either side of the door. In Tomb 228 a mason's mark is to be seen on the end-wall of the shrine, where lines were marked in red to show the stone-cutters the proper dimensions of the niche in the shrine. Another curious feature in this tomb is the outlining in red of an unfinished cavetto cornice above the niche. This could not have been intended for the guidance of the painter of the tomb, for, if the cornice was to be a painted one, all such marks would necessarily have been covered over with plaster before the painting was commenced. Either the cornice was marked to show the proper height of the niche, or it was intended to cut or mould a cornice of plaster, which would require such marks to indicate where to apply the plaster. In the third tomb the line of an architrave is marked in red upon the rock.

THE PLASTERING OF TOMB-CHAPELS.

After a tomb had been cut and squared, the walls were prepared for plaster, if the rock was of poor stone, or, if it was of good quality, for sculpture.

It can be regarded as certain that the majority of the more important tomb-chapels were painted because the rock in which they were cut did not permit of their being sculptured. The rock of the western desert at Thebes is a shaly limestone of varying quality which is fairly compact at and beneath the foot of the hills, but which, as one ascends, becomes more and more friable. Hence the sculptured tombs there, of which, alas, there are only too few, are situated at the base of the hills, and the painted tombs are above them. On the western bank there is a district now known as the 'Asâsif, where the rock is very suitable for sculpture, but it contains tombs only of the Saite period or prior to the

¹ Nos. 87, 89, 224 and 229. The last tomb has a mark resembling a *nfr* sign upon an unfinished column. There seems to have been a similar mark on a finished column.

² In this illustration we have a good example of such a guiding line in the middle of the column and also lines defining the edges.



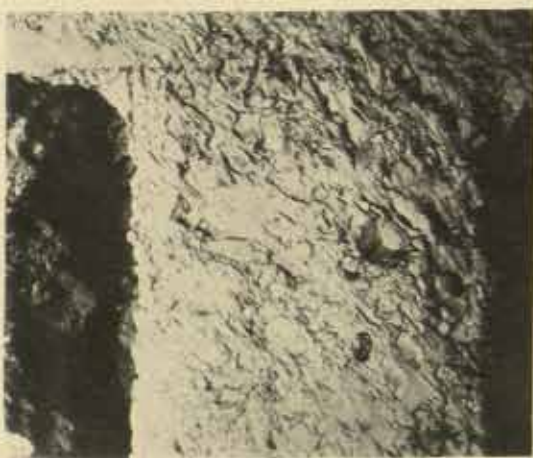
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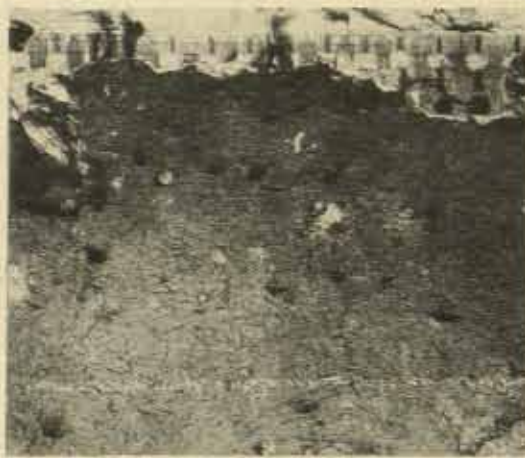
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TECHNICAL DETAILS FROM THE PRIVATE TOMBS AT THEBES (I)

Eighteenth Dynasty¹. The reason why this particular patch of ground was not utilized for tombs during the Eighteenth and Nineteenth—Twentieth Dynasties is probably explained by the presence of the temples of Mentuhotep III and of Hatshepsut, the approaches to which lead up from the river through the 'Asâsif.

In those few cases in which a tomb excavated in rock of good quality was painted, the surface of the rock was dressed as smoothly as possible and then covered with a thin coat of plaster on which the colours were laid. In two instances (Tombs 22 and 56), the colours were laid direct on to the rock without the latter being suitably prepared with a pore-filler; with most unsatisfactory results, for it led to a dulling of the colours, and, what is more serious, to considerable scaling.

A. *Mud-plaster*. The method most commonly used, and that which has proved to be the most permanent, was to cover the rock walls with a thick layer of mud mixed with *tîbn* (chopped straw) as a binding material. Upon this was laid a coat of lime-plaster or gypsum, of varying thickness, on which the scenes were painted. In those tombs which were cut in very friable rock, it was frequently impossible, owing to the nature of the stone, to obtain level surfaces for the walls; hence a great number of the painted tombs with walls of mud-plaster are very irregular, which is not the case with sculptured tombs. Another cause of irregularity in tomb walls is the contraction of the mud in drying, which pulled it away from the rock behind and produced an undulating surface.

When, in the course of cutting a tomb, the rock was found to be very bad, holes were often filled up with pieces of limestone and mud-mortar, which were eventually hidden by the general layer of mud-plaster. In the case of very large holes, bricks and sometimes brick walls were built in; so in Tombs 44, 157, etc.

Some mention should here be made of the tombs of Dêr el-Medîneh, which, with one exception that seems to be of an earlier date (Tomb 8, of Kha^c), belong exclusively to the period of the Nineteenth and Twentieth Dynasties. Owing to the friable nature of the rock in the lower parts of this valley, it was found necessary in many places to line the chambers that were excavated for tombs with walls of sun-dried brick and barrel-vaulted ceilings of the same material. Hence the lower tombs consist mainly of simple chambers or cells; in some cases they were made entirely of mud bricks and stood in the open at the foot of the valley. In many of the tombs built inside the rock, a hole was first excavated and lined with a single layer of brick; the outer chamber was then built on, and as a rule is found to have thicker walls than the inner one, as there was no rock face to support them.

The bricks used for the barrel-vaulted ceilings of these tombs were evidently made for this express purpose; they are thinner than those used for the walls and also have a series of deep grooves running the length of the brick on both sides, made by the fingers of the moulder when the brick was still soft. The object of these grooves was to ensure that the bricks should adhere closely to the mud-mortar laid between them, as they were placed with their grooved sides against one another, their edges forming the concave and convex sides of the vaulting. In some of the tombs one layer of brick was employed for the roofs, but in others, two layers for greater strength (see Pl. XXIII, Fig. 3). Such grooves in the bricks are not really necessary in the construction of vaulting, and are not used at the present day in Egypt. In all cases, plain mud-mortar alone was used to bind the bricks

¹ Lately a few Seventeenth Dynasty tombs, which are unpainted, have been found at the cultivation end of the 'Asâsif.

together, and in those tombs which have been protected from the elements and other dangers, the vaulting seems as strong as when it was first put up.

In an unnumbered tomb in the district of Dêr el-Medîneh there is a curious roof, half of rock and half of brick. The rock above the brickwork is in a very rotten condition and had to be supported by brick to prevent fragments falling. If the tomb had been finished, mud-plaster would have finally hidden this curious structure; see Pl. XXIV, Fig. 1.

It is rather a difficult problem to decide whether or not wood centring was employed in building these vaulted tombs; if so, very narrow sections must have been used, as, in the case of those tombs which were built in the rock, there was not space enough left between the rock and the top of the vaulting to make it possible for the mason to build the roof from above. Owing to the irregularity of some of the vaulting, it seems probable that a simple centring of loose bricks was the means by which these roofs were built, especially as this method is to this day employed in building the roofs of native houses at Aswân and in its neighbourhood.

Occasionally, fine limestone gravel was mixed with the mud-plaster, producing a substance much lighter in colour, but, as we now know, not very durable. Rarely, limestone gravel was mixed with lime instead of mud, a plaster also not permanent in character.

When the preliminary coating of mud was finished, it was left to dry before application of the final coat or coats, and in the process of drying it frequently came away from the rock and has been kept from falling only by its natural stiffness and the fact that it adheres to the roof and floor of the tomb. The thicker the coating of mud-plaster¹ the greater the contraction, but, by very reason of that thickness, the more likely is the wall to remain intact. On the whole, a mud-plastered wall when well rammed is as durable as any other in an exceptionally dry climate like that of Egypt. There is one objection, however, to the use of mud-plaster, which the ancient Egyptian did not anticipate, namely that by removing pieces of it bodily it is easier to destroy than any other plaster.

As a general rule, mud-plaster was faced with a coating of lime or gypsum-plaster in order to provide a sufficiently smooth surface to take the colours. In ten tombs², however, the final coating was of mud, a method only used in the latter end of the Eighteenth Dynasty and in Ramesside times, and its rareness even in those periods may be explained by the great difficulty of providing by its means a surface smooth enough to paint upon, owing to the tendency of mud, however carefully applied, to crack and roughen in drying. Paint applied to mud direct has a peculiar brilliancy which is unmistakable and can be recognised at once on entering a tomb. The reason of this is doubtless the non-absorbent properties of mud as compared with plaster, which has to be sized before it can be painted upon. A plain mud surface, however, is not so durable as a plaster one, the walls being soft and the *tibn* contained in the mud being exposed to the attacks of white ants.

Before leaving the subject of this material, it is interesting to note that in Tomb 138 (Nezemger), of the period of Ramesses II, a series of eight light mud buttresses was built against the mud-plastered long walls of the outer chamber to prevent their falling. These buttresses were built at the same time as the walls were plastered and are not later additions, the painted scenes being put between them.

¹ In some tombs the thickness has been found to be as much as 20 cm.

² Tombs 5, 7, 8, 40, 51, 80, 111, 181, 217 and 259. In Tomb 40 the mud has been rubbed down to an exceptionally smooth hard surface.

B. *Lime or gypsum-plaster.* A coating frequently applied to tomb walls was of lime or gypsum-plaster. It was generally used in those tombs which were cut in the harder rock and did not therefore require a very thick coating. The average thickness of such a plaster was 5 cm. In some tombs, doubtless for the sake of economy, this kind of plaster was reinforced with pieces of limestone, and in Tomb 155 (Antef), the lime-plaster is mixed in places with linen rags to bind the coating more firmly together. A lime or gypsum-plaster was also often applied as a coating to mud-plaster, as it could be provided with a very smooth surface with little trouble by the aid of a float, the marks of which can be seen in many tombs.

C. *Hib-plaster.* *Hib* is a substance found in large rock pockets or basins in the desert. It consists of a kind of decayed limestone of a light yellow colour. At the present day it is largely employed as a coating for the inside walls of houses, as it can be rubbed down to a very smooth surface. It is difficult to paint upon direct. Occasionally an admixture of *hib*, sand and lime was applied as an extra coating to mud-plastered walls, but it was not satisfactory owing to its softness. The few tombs in which this material was used are situated fairly near together and belong, with one exception, to the latter end of the Eighteenth Dynasty¹. The close vicinity of a large pocket of *hib* perhaps explains its use in their preparation. Five of these tombs (Nos. 108, 172, 175, 200 and 201) have *hib*-plaster applied to all or a part of their walls, with, of course, the necessary thin coat of lime-plaster over it to take the colours. The walls of the remaining tombs are covered with alternate layers of mud and *hib*, noticeably in Tomb 181, some of whose walls bear three successive thin coats of plaster, namely, mud-plaster next to the rock, then a layer of *hib*, followed again by a layer of mud. It is difficult to see why *hib* was thus employed, considering its defects, except that perhaps it was cheap, as it could be obtained on the spot, whereas mud had to be brought from a distance.

In many tomb-chapels we find mud-coated walls associated with lime-plastered ceilings, a combination which was well suited to the case of tombs cut in very poor rock. After the walls were finished, the roofs were first coated with a thick layer of lime-plaster into which numbers of flat limestone chips were then hammered while the material was soft. This conglomerate was then finished off with a smooth coat of lime or gypsum-plaster. The same method was followed with mud-plaster, but ceilings in that material are not common, except in the harder rock, because of the tendency of a thick coating of mud to drop when drying, owing to contraction and the weight of the stone in it. As a general rule, mud-plastered roofs are for these reasons somewhat thinly coated, while roofs with other kinds of plaster are generally very thickly coated and on that account are comparatively even².

In rare instances (the writer knows of only two examples, namely Tombs 63 and 181), a shelf was cut along the sides of the tomb-chamber or chambers in order that the edges of the mud-plaster of the ceiling should rest upon it in case it failed to adhere properly to the rock roof above. In the case of a small chamber, a mud ceiling of any considerable thickness would be greatly helped by such a support at the edges.

¹ Tombs 38, 69, 103, 108, 138, 172, 175, 181, 200 and 201. The exception is Tomb 103, which is of the period of the Eleventh Dynasty.

² The mud ceiling of the outer chamber of Tomb 63 is in some places over 30 cm. thick and has fallen owing to its great weight. Such ceilings were made by applying successive coatings of mud-plaster as the preceding ones dried.

A strange method of avoiding the use of stone in mud-plastered ceilings is to be seen in a few tombs of the Nineteenth and Twentieth Dynasties, namely, Tombs 51, 111, 149 and 166¹; large pieces of dried donkey dung were inserted in the wet mud instead of stones. This material, though having no strength in itself, yet has the advantage of being extremely light, and so a greater thickness of mud could be applied through its aid in the case of a very uneven roof. It should be noted that in the well-known tomb of Menna (No. 69) pieces of wood resembling that of the date-palm were pressed into the mud-plaster of the roof of its outer chamber near the entrance. In Tomb 51, the nuts of the *dôm*-palm were utilized in making the ceiling of the inner chamber of the tomb.

The ceiling of a tomb, if of mud, seems to have been plastered before the walls were commenced, for in the case of an unfinished tomb the roof is always finished and sometimes painted, whereas the walls may be untouched. In those tombs, however, which have mud-plastered walls and lime-plastered ceilings, it is evident that the coating of mud on the walls was applied first and allowed to dry before the work on the roof was started, a procedure which left no cracks due to shrinkage at the junction of ceiling and wall.

In practically every case, it is evident that the first and preliminary coat of lime or mud-plaster was applied to the rock by the hands of the plasterer, as the finger marks show, in the form of deep grooves. For this kind of work the hand is the best tool, as the plaster can be well pushed into cracks and fissures of the rock which could not be reached with any other tool. The final coat of plaster was certainly applied with the aid of a float, and where the plaster is exceptionally thin a stiff brush was probably also employed. In Tomb 91 there are quite obvious brush-marks.

Occasionally, when the plastering was finished and the tomb-chapel was being painted, small defects appeared in the plaster which needed repairing. From the poor way in which these repairs were generally carried out, it would seem that they were done by a man inexperienced in such work, probably by the artist himself or his assistant. Sometimes, but fortunately only rarely, the mistake was made of applying a coat of lime-plaster over another coat already dry without first roughening the undercoat to afford a key-hold. A good example of this mistake is to be seen in the inner chamber of Tomb 148, where important sculptured work in plaster has suffered from the surface layer having fallen away.

In some cases walls were plastered in three layers, as is especially noticeable in Tombs 60, 69 and 139. In the former tomb, the walls were first covered with a mixture of lime and *tibn*, which was followed by a coating of mud and faced with a coating of lime-plaster. In Tomb 69 the first coat was of mud and *tibn* with a layer of *hib* and lime over it, followed by a thin lime-plaster to take the colours.

The final layer of lime-plaster varies considerably in thickness. In Tomb 52 an unusually thick coating of plaster was laid on the mud, in some places over 3 cm. thick. On the other hand, in Tomb 68 the final coating of plaster was exceptionally thin, and appears to have been applied with a brush.

The plastered faces of the unpainted or partially painted tombs in the Necropolis are of a light drab colour, which suggests that they were treated with a solution to fill up the pores, for the natural colour of lime or gypsum-plaster is a light grey or a pinkish-grey. There is no doubt that a pore-filler of some kind must have been employed, for the plaster could not otherwise have been painted.

¹ Tomb 149 has been burnt out, and the hollows left by the dung are clearly visible.

It would appear from the evidence to be found in several tombs, and especially in Nos. 78 (Haremhab) and 79 (Menkheper), that the plasterers often started work on the walls before the masons had finally finished cutting the chapel. In Tomb 78 the outer faces of two columns were plastered with a preliminary coating of mud, though their backs are still rough and in places not trimmed, nor even properly cut.

Mud-plaster and lime-plaster were also employed for the construction of simple architectural features in a tomb-chapel, such as stelae, false doors, cornices, mouldings, etc. The use of lime-plaster for such a purpose was a comparatively simple matter, but the manipulation of mud presents many difficulties. A good example of a mud cornice can be seen at the entrance to the innermost chamber of Tomb 65, and there is a representation of a stela in raised mud-plaster in Tomb 75. Lime-plaster stelae occur in Tombs 21, 67, 75 and 254, and there is an excellent representation of a false door in the same material in Tomb 100. Cornices of moulded lime-plaster can be seen in Tombs 29, 65, 100, 201 and 253.

It is probable that the mud used for plastering tomb walls was as carefully selected and prepared for use as were the other substances employed. At the present day, the mud for good work is carefully sifted when dry and put into soak for three or four days before use. When straw is mixed with it, as is usual, this is also put with the mud to soak¹. An interesting sidelight is thrown on this matter by the biographical stela of Anena (Tomb 81), in which, among other things, Anena says, "I made fields of clay in order to plaster their tombs of the necropolis²." It is possible that in ancient times in Egypt a man who possessed a plot of suitable clay permitted people to use it in the preparation of their tombs in order to obtain merit in the next world. It is considered an act of piety in Egypt at the present day to allow poor people the free use of mud for the purpose of building a house, etc.

SCULPTURED TOMBS.

Only in the case of a sculptured tomb was the ancient Egyptian anxious to obtain a really flat surface, as a rough wall was more adapted to a coat of plaster. An exceptionally good example of the dressing of a hard rock face to be sculptured may be seen in Tomb 166 (Rācmōse). The walls of the tomb were first roughly hewn into shape by means of chisels, two sizes being employed, whose cutting edges are shown by the marks left on the walls to have been 9 and 14 mm. in breadth respectively. The strokes left by these chisels are either vertical or oblique with the point running to the left as one faces the wall. The narrower chisel seems to have been used to remove the projecting pieces of rock, while the broader one was employed to face it. When the passages and chambers of the tomb were roughly squared off, the surface of the rock was dressed down to a smoother surface by means of an adze. That it was an adze that was used for this purpose is proved by the tool-marks showing none of the signs of shake, which are always present in the marks of tools used in conjunction with a mallet. An additional proof is that the adze strokes are always oblique, running from left to right or *vice versa*, whereas if a chisel is used with a mallet, the strokes always run in one direction only; for it is difficult to use a chisel properly with either hand, whereas an adze can be employed in this way. By the use of an

¹ Mr Robert Mond is of the opinion that the presence of straw in mud-plaster or mud-brick turns it into a highly plastic clay by reason of the formation of colloidal bodies during the fermentation of the straw (Lecture at the Royal Institution: "The Mortuary Chapels of the Theban Nobles," May 22, 1914).

² BREASTED, *Ancient Records*, II, § 106. This actually refers to some of the Royal Tombs, but the same conditions must have held for the private tombs.

adze, which had an edge of 10 mm. in breadth¹, an almost flat surface was produced, but not one sufficiently smooth to be sculptured. A last dressing was then given to the rock by means of a broad-bladed adze, which only took off a thin shaving of rock, leaving slight traces here and there of the previous deeper chiselling. Before this last bit of tooling was done, however, cracks and flaws in the rock were filled in with lime-plaster, the surface of which was levelled together with the rock surface; see Pl. XXIV, Fig. 4 (Tomb 55), where the small white marks represent plaster. Finally, a thin coat of wash was laid on the wall to conceal the porous face of the plaster and to hide any tool marks that were left. In other sculptured tombs the final coat of wash was applied after the wall was carved, and not before. It was probably found easier to apply a wash all over than merely to fill up the pores of the rock with a solution. Limestone requires a very large amount of pore-filler to make it fit to take a water-paint. This was fully realized in the earlier periods, but the tendency in later times, and especially in the Saite and Ptolemaic periods, was to apply an excessively thick coating of plaster to the sculptures, with the result that much detail was lost.

In the tomb-chapel of Ra^cmōse (No. 55), we can clearly see the stages in the completion of a wall by an artist-sculptor. In this tomb, and also in others, after the broad-bladed adze already alluded to had produced a uniform surface, an abrasive stone or other such material was rubbed over the wall to make it still smoother. This is to be seen in other tombs, *e.g.* Nos. 31, 48, 53, 56, 57, 106, 125, etc. As was doubtless intended, this procedure effaced the very slight marks left by the adze, but did not entirely do away with the marks left by the original chiselling, which it was evidently not thought necessary to remove completely.

The finished and rubbed-down wall was next set out with red lines into squares, on which the designs and figures to be carved were outlined in black paint; see Pl. XXIV, Fig. 3 (Tomb 55). The background between the figures was then cut down to a depth of about three millimetres by means of a fine-edged chisel, and was then rubbed down again with an abrasive to remove the chisel marks, thus leaving a series of figures outlined in relief with square edges. After this preparatory process had been completed the edges of the reliefs were rounded off, for which purpose a knife or hand chisel was employed, as is shown by the smoothness and regularity of the cuts, there being a total absence of the jump-marks which are bound to occur with the use of a mallet or hammer. When all the square edges had thus been neatly rounded off, attention was paid to the modelling of the minor details, such as the fingers of the hands and the more prominent muscles, etc. It seems that no particular plan was followed as to the parts of the walls or figures to be finished first, for in some cases the feet of several figures were completed before even the background was cut down on other parts of the same wall.

In Tomb 257 (eastern wall of outer chamber), the outlines of the figures were first roughly cut with the point of a flat-edged chisel², with which a hammer was evidently employed, as each cut is separate and short, making the outline appear slightly serrated. When all the outlines had been cut in this way, a thin chisel or graver with a very sharp edge was used, without a hammer so as to make as broad and as smooth a cut as possible³.

¹ The average width of the adzes used has been found from measurements made in a number of tombs to be 11 mm.

² The marks left by this chisel vary from 2 to 3 mm. in breadth, but from various indications it would appear that a wider chisel than this was employed, and that it was used obliquely and with only one of the points marking the rock.

³ A hand chisel seems to have been generally employed for this special work.



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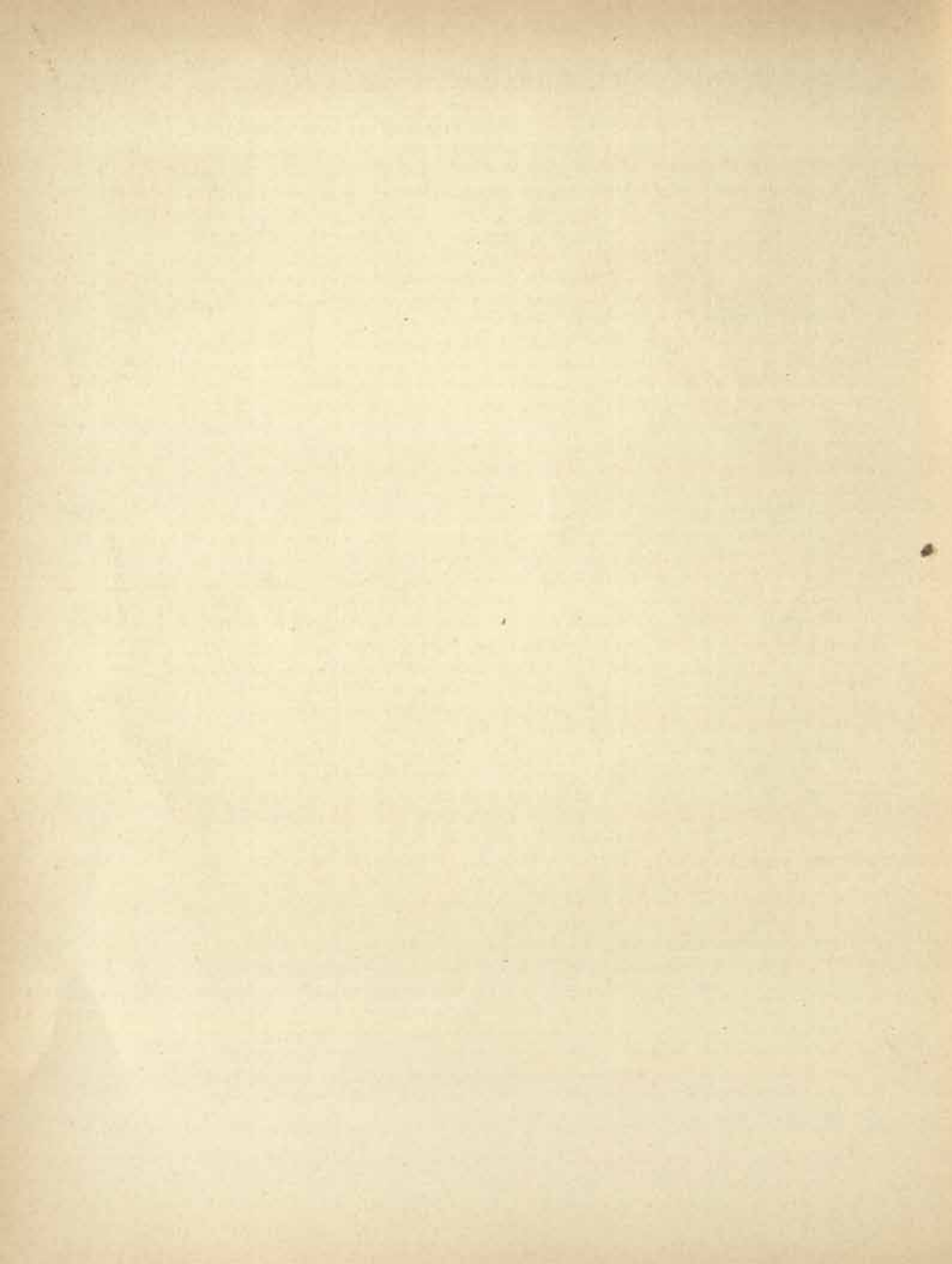


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TECHNICAL DETAILS FROM THE PRIVATE TOMBS AT THEBES (II)



The Ramesside work in this tomb is of the *relief en creux* type, that is, the limbs and the body are incised in the stone with the modelling just level with or below the general surface of the wall. The preliminary modelling of the limbs was accomplished by placing the edge of the chisel in the middle of the space between the two incised outlines and cutting towards these. This method left a sharp ridge down the centre of the limb, which was afterwards smoothed off and rounded over. There is no trace in this tomb of the figures being first outlined in red or black. The sculptor seems to have outlined his figures without anything to guide him, which argues considerable courage on his part. It is, however, conceivable that outlines were first marked in with a loose colour which could easily be brushed off.

In many sculptured tombs it was not considered at all necessary to remove the chisel marks from the skirting of the walls, though the rock prepared for carving on the upper parts of the walls might be worked exceptionally smooth. An otherwise well-dressed wall is, therefore, frequently found to be very rough and badly dressed along the lower edge, as in Tomb 36, which was probably left so with a view to its being painted in broad bands of colours, as was frequently done.

As stated above, flaws in the rock were filled in with lime-plaster, which was trimmed and sculptured to match the surrounding rock. In many instances, however, flaws and faults in the rock were much too large to be satisfactorily dealt with in this way, and recourse was had to the expedient of cutting out the defective part and neatly inserting a limestone block in its place, secured with a lime-cement. These blocks were inserted before the rock surface was dressed down. Good examples of the insertion of stones in this manner are to be seen in Tombs 11, 36, 39, 55 and 65. Inset stones are nearly always irregular in shape, though their edges are straight and slightly bevelled. It appears from this that the mason cut away only the bare limits of a rock flaw and inserted a stone of the required shape. This must have caused an unnecessary amount of trouble, one would think, as an exactly square or rectangular hole could be more easily filled with a corresponding stone than an irregular one. It must be admitted, however, that the inset stones fit the apertures fairly well; see Pl. XXIV, Fig. 4 (Tomb 55) and Fig. 2 (Tomb 36).

In a few instances the mason, in cutting out a tomb, found that whereas at one end of a chamber the rock was of excellent quality it was extremely poor at the other end. In such a case, a thick layer of the poor rock was removed and a limestone wall was built up in its place. In Tomb 39 nearly the whole of one of its inner shrines had to be built up in this way, as the masons found a poor stratum of rock at the end of the tomb. The same method was adopted on a smaller scale in Tomb 20.

In Tomb 57 (Kha'emhêt) there are two interesting examples of large inset stones. In the course of cutting the outer chamber, a large natural fissure or flaw was found in one of the walls, extending about half way across the ceiling. A large stone measuring 90 by 60 cm. was cut and fitted into the wall, and two stones, which together measure roughly 98 by 91 cm., were inserted in the ceiling. To prevent the two blocks in the roof from falling, their edges were cut slightly wedge-shaped so as to engage the surrounding rock which was similarly cut to fit them. One end of each of these two stones was also made to rest on the top of the large block inserted in the wall. The latter has now fallen, but the two ceiling stones still remain *in situ*, which is good testimony to the skill of the mason who put them up. To fit in two blocks of stone in this way satisfactorily must have been a somewhat difficult proceeding. As their edges are wedge-shaped, the man who put them up must have cut a hole in the roof deeper than the thickness of the blocks in order that they might

drop properly into place. A certain amount of surplus stone was evidently left on what were to be the exposed faces of these two blocks, and this was trimmed off afterwards when the roof was levelled. This is proved by one of the stones having a slight projection at right angles along part of its end, which projection forms part of the wall of the tomb.

Occasionally the walls of a sculptured tomb were covered with a thin stucco coating, on which the various colours were applied. It should be mentioned before proceeding further that all carved walls were intended to be painted, and that in only one tomb, as far as is known, was it possibly intended to omit painting the sculptured scenes. This is the tomb of Raḥmōse, which is unfinished, and even in this case it is not at all certain that its sculptured walls would not have been coloured eventually, if time had permitted. A few walls in carved relief show indications that the coat of stucco was a fairly thick one, and in some cases it has destroyed a certain amount of detail, so that one wonders why it was ever put on at all and the paint not applied on the rock surface itself. It seems, however, that some difficulty was found in applying colours direct to stone, perhaps owing to the great absorbent powers of limestone, which would take up all the moisture of the paint, including its fixative, and leave the colour in a powdery form on the surface¹. Most sculptured tombs now show very little trace of their original colouring, which remains only in some of the hollows of the reliefs and in other well-protected parts.

Sculptured plaster. A peculiar method of working in relief on plaster was extensively used in this necropolis in Ramesside times. It appeared first in the Eighteenth Dynasty, but does not seem to have become popular during that period, probably owing to its being considered a very poor and cheap imitation of rock sculpture. The rock face was covered with a thick coating of lime-plaster, and before this coating had dried, and sometimes after, the scenes and inscriptions were modelled or carved in it. There is no doubt that very effective results could be obtained in this manner, and one of the best examples of this kind of work in the Necropolis is to be seen in the Ramesside tomb, No. 148 (Amenemopet), which, though badly destroyed, yet has some excellent relief work left in its outer chamber. Another good example, though the work is poor compared with that in Tomb 148, is the remarkably well-preserved Ramesside tomb, No. 23 (Thoy). With the exception of these two tombs, the majority of examples of relief in plaster show evidence of poor execution, as is to be expected of Ramesside work.

The processes gone through in this form of sculpture were as follows:—The figures and scenes were modelled as far as possible before the setting or hardening of the plaster prevented further work in this direction. Cutting was then resorted to, leaving a very porous and pitted surface which had to be coated over with a fine slip to make it smooth when the work was completed. Tomb 26 (Khnememhab) is an excellent example of an unfinished tomb showing these various stages of work. It is quite evident that in this tomb, and probably in most of the others carved in plaster, a slow-setting material was employed, which most likely contained a large proportion of lime mixed with a little gypsum.

Tomb 26, though a very large one and made for an important personage—Khnememhab was Overseer of the Treasury of the Ramesseum—yet affords striking evidence how Egyptian craftsmanship had deteriorated even in the Nineteenth Dynasty. This tomb is

¹ Another probable objection was that in order to paint direct on stone it was first necessary to have an exceptionally good surface, which meant much time and trouble, whereas by applying a thick wash to the walls this extra toil was avoided.

cut in rock quite equal in quality to that of the tomb of Raḥmōse, and yet the sculptor preferred to smear the surface of the limestone with a coating of thick plaster and execute his work in that material. The only exceptions that he made were the jambs of the entrance doorway and those parts of the wall facing the door which were well lighted; on these parts he carved in the rock itself. The cost of sculpture as compared with painting must have been considerable. It is true that some attempt was occasionally made to utilize the rock as a material to work in, but only the simple outlines of the figures were carved in the stone, and to these figures a coat of plaster was applied, in which the limbs and faces were modelled or cut. Thus we have here a series of figures which were cut in two materials, the upper layer being plaster and the lower one stone. That this curious form of technique is not, as it were, an accident is shown by the fact that it can be seen in another tomb, No. 105 (Khaḥemopet). Here there are similar figures cut in relief in good rock, but with a thick coating of plaster spread over them. The surface of the rock-cut figures was purposely left rough so as to afford a good keyhold for the plaster. Unfortunately, whereas Tomb 26 definitely belongs to the time of Ramesses II, this tomb can be only tentatively assigned to the Nineteenth Dynasty, which makes it impossible to decide whether the work in the two tombs belongs to the same reign, and, perhaps, to the same craftsman.

Another tomb (No. 23, that of Thoy already mentioned) affords an example of this system of carving in plaster instead of direct upon the stone, which in this tomb also was of fairly good quality. Simple work, such as hieroglyphic characters, was in most cases cut direct in the stone, but more complex work was first outlined in the stone and then heavily plastered, the latter serving as a relief. From the roundness of the edges, absence of scratches and other indications, it would appear that the plaster was modelled when soft and not cut after it was dry.

There are, as before mentioned, but few tombs of the Eighteenth Dynasty where plaster was employed as a material in which to work in relief. When it was so used, it was generally only on the jambs and lintels of the doorways leading into the inner chambers of painted tombs¹. The best examples at present known are Tombs 82, 85, 97, 99 and 188. In the first of these tombs (Amenemhēt), the statues of the owner and his wife are moulded in plaster on a rough core of rock, and the doorway in the west wall of the outer chamber and the lintel above the niche in the shrine are also decorated with reliefs moulded or cut in plaster. Tomb 85 (Amenemhab) has two figures in relief upon the plaster jambs of the doorway leading into the inner chamber. Parts of Tomb 65, which was usurped and replastered in late Ramesside times (Imisibe), were also originally carved in plaster². There can be little doubt that the idea of cutting reliefs and incised figures in plaster is derived from the compulsory use of that material in filling up flaws in the rock walls of tombs that were intended to be sculptured in the usual manner, in which case the sculptor had to cut or mould small surfaces of plaster in the course of his work in order to make the scenes and figures continuous and unbroken.

In the inner chamber of Tomb 189 (Nekhtdhout), which is of Ramesside date, the walls are in places plastered with a mixture of mud, chopped straw and a little lime, in which

¹ Wigs, of which many excellent examples may be seen in Tombs 18, 54, 79, 100 and 155, are excepted.

² It was begun as a sculptured tomb. The north wall was sculptured by Nebamūn, the original owner, but, owing to the bad state of the rock, it was found necessary to employ plaster and carve in that material. Despite the difficulties the work is very good.

curious material inscriptions and figures were cut. This tomb is the only example of carving in mud that the writer has found.

It is quite possible, though a search for indications of this has proved unsuccessful, that the plaster was applied to the rock surface bit by bit for convenience in modelling. If the whole surface of a wall were plastered at one time, the greater part of the plaster, even if slow-setting, would certainly be useless for modelling purposes and could only be cut, and even then with difficulty. The method of applying plaster to a limited surface at a time has been found by the writer, in the course of restoration work, to be a very convenient one, for even after it has set, plaster can be carved with a certain amount of ease with the use of a hammer and chisel as long as it is still damp. When it is quite dry, however, it is prone to break away in small pieces.

Carved plaster work is very common in the Tombs of the Queens, where the finest example is to be seen in the inner chamber of Tomb 36. In these tombs even purely ornamental work, such as *keker* friezes, etc., was cut in plaster.

EXCAVATIONS AT TELL EL-AMARNA: A PRELIMINARY REPORT

BY PROFESSOR T. ERIC PEET, M.A.

DURING the past winter, after an interval of seven years, the Society has succeeded in resuming excavation in Egypt. The site chosen was the so-called Tell el-Amarna¹, where lie the mounds which cover the remains of the city of Akhetaten, built by Akhenaten (Amenophis IV) about 1370 B.C. and abandoned within twenty-five or thirty years. The staff of the expedition consisted of Messrs A. G. K. Hayter, F. G. Newton, A. R. Perry, P. L. O. Guy and the writer. The first task was to transfer the furniture and excavating equipment from our old house at Abydos to the new site. This tiresome preliminary was undertaken by Mr Hayter and Mr Perry, who arrived in Egypt shortly before the end of the year, and completed the transference on January 15. Work was begun, after a short initial survey of the site, on January 18, and continued without interruption until March 23. The main body of workmen consisted of forty skilled men from Kūft and Kurneh, all of whom have been with us for some years. To these were added a few of the more intelligent inhabitants of the neighbouring villages, and a force of over 150 boys and girls for carrying. The introduction of girls, never used by us at Abydos, is explained by the fact that in the district round Tell el-Amarna women hold a distinctly lower position in the eyes of their men-folk than in the villages further south, and consequently do much more of the hard work.

An expedition sent out to a site which is already well known and partly worked should of necessity have some definite objects in view, and possibly some hypotheses to test, though, at the same time, the more open the minds of its members on the subjects concerned, the more correct and valuable the results are likely to be. An excavator who goes out determined to prove that *A* is *B* is liable to distort the evidence quite unconsciously, to belittle what does not fit in with his hypothesis, and to magnify that which does. In this way he may do a very serious disservice to his science. Entering as we did upon a site which bears on some of the most thorny problems of Egyptian history and religion, we endeavoured to free our minds from every kind of prejudice. The main objects of the expedition, apart from possible modifications which might be introduced by unexpected discoveries, were as follows:

1. To continue the systematic clearing of the town site, begun by the German excavators in 1907-14², to gather, if possible, new details as to the architecture and arrangement of the houses, to learn more of the life of the inhabitants, and to secure objects for museums.
2. To throw fresh light on the numerous difficult problems raised by the so-called religious revolution of Akhenaten.

¹ This senseless misnomer has gone too far to be rejected.

² See *Mitteilungen der Deutschen Orient-Gesellschaft* (hereinafter *M.D.O.G.*), Nos. 34, 46, 50, 52, 55 and 57.

3. To investigate the question of dating, and in particular to determine whether the site had been occupied before the reign of Akhenaten, and whether it was ever reoccupied, either partially or wholly, after the great abandonment which so soon followed its foundation. In this connection it was of vital importance to examine the date, from the Egyptian side, of the Aegean pottery fragments found on the site at various times.

It will readily be recognized that the two last objects are distinctly controversial in character, and that all evidence which bears on them must be viewed with the closest observation and the strictest impartiality.

In the description of the season's work which follows it will be convenient to adopt a geographical arrangement¹, detailing separately the work done on the various portions of the site, but in each case discussing the bearing of that particular section of the excavation on the problems stated above.

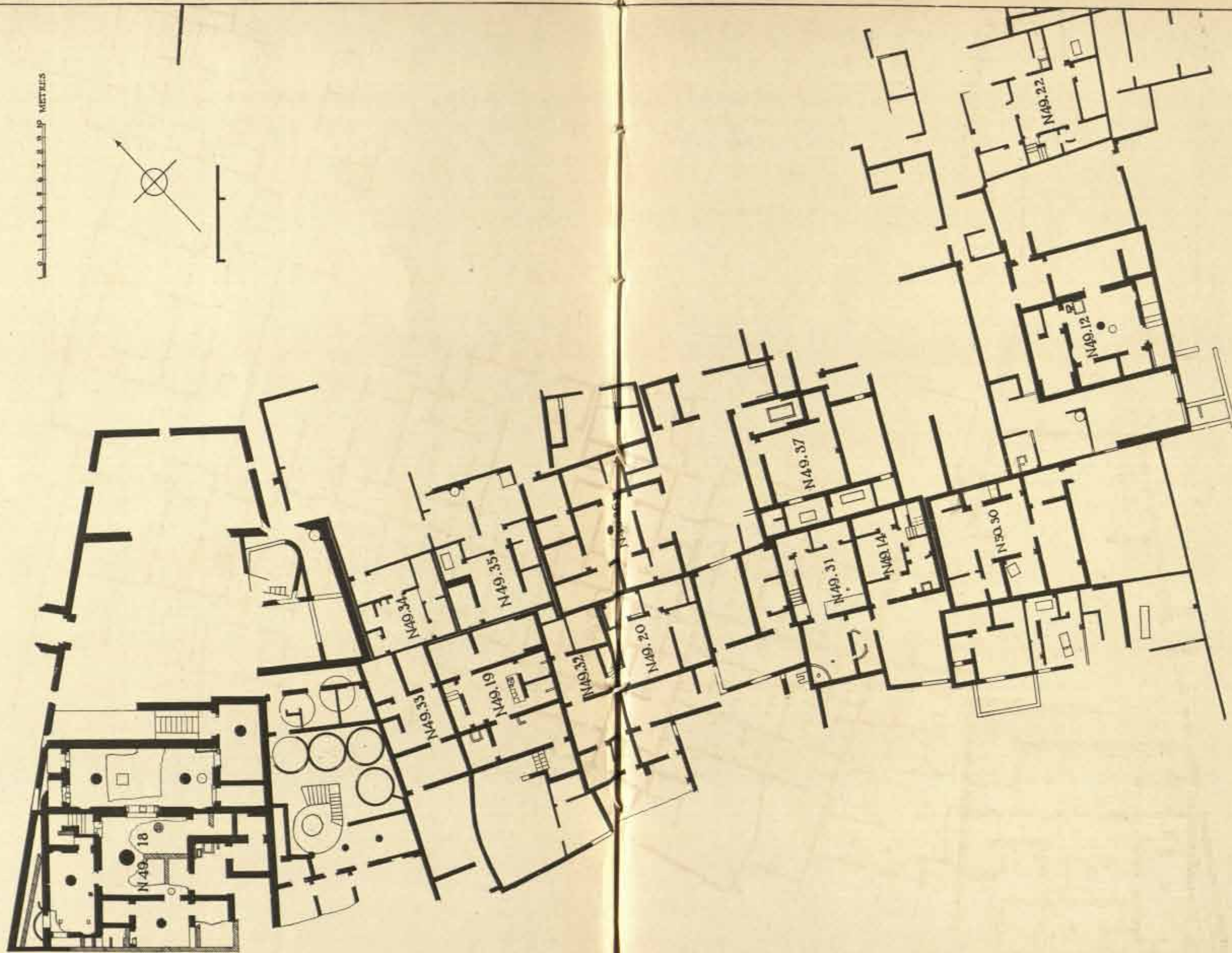
Excavations were made in four distinct parts of the site. Firstly on the old town mounds, secondly in a small walled village situated in a valley of the sandy foot-hills, two kilometres east of the town mounds, thirdly in the tomb-chapels which lie on the slopes of these foot-hills, and fourthly in the rubbish mounds of the Palace of Akhenaten.

I. THE TOWN MOUNDS.

The excavators of the Deutsche Orient-Gesellschaft had devoted four seasons to these mounds, which lie on the edge of the cultivated land, and are about seven kilometres in length and less than two kilometres in breadth. They had begun at the south end on the side furthest from the cultivation, and had followed for nearly a kilometre and a half a broad road running north and south, which they named the Street of the High Priest, after the owner of one of the finest houses found in it. This portion of the site they found much less disturbed by the modern *sebak*-diggers than that nearer the fields, and it had the further advantage of obviously containing the greatest number of large houses. In addition to clearing this long strip our predecessors had worked a strip at right angles to it, running from east to west, and comprising the two edges of a broad flat watercourse, at present dry, which cuts the site in two. It was manifest that our work must be a direct continuation in some direction of the old. It further seemed advisable to choose and clear a solid block of buildings, rather than to continue the method of pushing out along straight lines, or, in other words, to clear a quarter of the city rather than another street. With this in view we began work in the angle left by the German excavations near the converging point of squares N. 48, O. 48, N. 49 and O. 49 of the German survey, with the intention of working eastwards and southwards, and thus clearing the whole block of buildings which lies between the High Priest Street and another roadway roughly parallel to this and west of it, whose existence had long been suspected². This roadway we have for reference purposes named Street A. In order to determine its position and length an elaborate series of trenches was opened in it, beginning at its north end, where it debouches into the broad valley mentioned above, which cuts the city in two. Southward the road was traceable for a distance of 300 metres, and future excavation will follow it even further. It should be stated here that this roadway, like all others as yet found on the site, was not

¹ Throughout this article the words north, south, etc. are used in the sense in which the local native employs them, north indicating the direction in which the Nile happens to flow at this particular point of its course, south the opposite direction, and so on. The bearing of this "local north" is about 30° east of true north.

² *M.D.O.G.*, No. 55, 8-9.



PLAN OF SOUTHERN PORTION OF EXCAVATION IN THE TOWN MOUNDS
OF TELL EL-AMARNA

paved or laid in any way, its surface consisting simply of the soft sand of the low desert plain.

Between this street (Street A) and the High Priest Street our excavations revealed in the northern portion a number of good houses with extensive gardens, sometimes with wells and summer-houses in them, and high garden walls on the Street A frontage. Very similar was the arrangement in the centre of the block. Here, unfortunately, we were unable, through lack of time, to complete the excavation of the houses themselves, though the frontage walls on Street A were traced out, and the position of the wells was indicated by depressions in the ground. The conditions at the south end of the block were, however, very different. Here there had apparently existed a street uniting Street A and the High Priest Street, and running at right angles to them. Down this street a stream of water has made its way in rainy seasons, and has gradually washed away the outer walls of the houses on the north side of the street. These houses form the south frontage of our block. The finest of them is that which stands at the corner of this cross street (Street C) and Street A. This is shown by the inscriptions on the side-posts of one of its doors and on the niches in its North Loggia to have belonged to Ra^cnüfer, the Master of the King's Horse. It was the finest of the houses which we excavated, and its description will serve as a type of the larger houses in the quarter. It possessed, moreover, a special interest from the excavator's point of view, because it was evident from the first that we had here to do with a building which had undergone considerable alteration, and which might yield some of the chronological evidence the securing of which was one of our chief objects at Tell el-Amarna.

The house was roughly square (see Pl. XXVI, Fig. 2, taken from the east, and plan on Pl. XXV). On the west it is bounded by Street A, which, however, does not run parallel to the wall of the house. On the south lies Street C. The water which from time to time has found its way along this street has seriously damaged the south walls and rooms of the house. To the east is an enclosure with granaries and well, while to the north is a garden containing a second well¹. The house is entered by a low flight of steps on the north. These lead through a small anteroom into the long narrow North Loggia. The door between the anteroom and the loggia had side-posts of stone, the bases of which are still in position (visible in the photograph), while the upper portions were broken into hundreds of fragments found lying scattered about the loggia. These side-posts were inscribed with a short adoration of the Aten by the Master of the King's Horse, Ra^cnüfer. In the loggia itself two circular limestone column-bases are still in position, and it is probable that two more have been removed from between these, so that the roof was originally upheld by four columns, doubtless of wood. In the outer wall there was, to judge by the evidence of other houses, a long low window. At the west end were two small rooms opening off the loggia, but reduced by the proximity of the street wall to mere closets. In the centre of the south wall is the great doorway, 2.45 m. broad, which leads into the Central Hall. The threshold is of limestone, and in its centre is still visible the outline of a rectangular centre-post, dividing the doorway into two halves fitted with separate doors. In the wall of the loggia, one on each side of the doorway, and at 2.40 m. from it, are two of the shallow niches which are such a strange yet invariable feature of the Tell el-Amarna houses. These niches are always coloured; in this case they are entirely red. In some houses they are divided into three vertical panels of equal breadth, the

¹ This perhaps belonged to a house now destroyed.

centre one being yellow and the two outer ones red. On the wall, on each side of the two niches, is a vertical inscription in coloured hieroglyphs on a yellow ground, giving the name and titles of Ra'nüfer.

The Central Hall is peculiar in that it contains only one limestone column-base, and that of very large size (diameter 1.05 m.) and unsymmetrically placed, it being slightly to the west of the centre of the Hall (left half just visible in photograph). The countersinking in this base for the wooden column has a diameter of only 42 cm., so that the base itself must have served as a kind of circular seat in addition to supporting the column. In the west wall of the Central Hall are two doorways; the more northerly gives access to a flight of stairs, once shut off by a door, and leading on to the roof, while the other leads to the West Loggia. This last is very small in comparison with the North Loggia, and has obviously undergone considerable modifications at some time. Thus, at its north end, a rather pretentious doorway gives access to what is now a mere dark closet under the stairs. Several indications lead us to suspect that this was not the original arrangement, and that the rectangular space in which the stairs now stand was once a room. Almost more puzzling is the south-west corner of this loggia. Here, in the west wall, is a door leading out into the useless triangular space between the house wall and the street wall. But this is not the worst. This doorway has an older threshold at a lower level, perhaps that represented in various parts of the house, and known to us as the "43 cm. level". But the passage through the door at this level is blocked by what look like the remains of the wall of a circular granary, which must be older than the loggia wall and its doorway, since its lower courses pass right underneath them. There is no difficulty in understanding that this part of the house was built over remains of earlier granaries which the new builders did not trouble to destroy completely; but why they should have made a doorway and yet have left it partially obstructed by an earlier wall passes comprehension.

The remainder of the house consists of a series of small rooms reached from the Central Hall, and in part damaged by water. Along the south side, for instance, are the remains of what the German excavators have called the Square Chamber, with two rooms opening off at either end of it. We found no trace of the usual bathroom, though in a house of this size it can hardly have been lacking. Nor did we find the ablution slab which is generally present in the Central Hall; doubtless the stone has been carried away for building purposes.

East of the house lay the well and granaries. Here considerable modifications of the original arrangement have been made. Thus two of the granaries have been cut down level with the ground, filled up with rubbish², and built over with poor walls. The well, too, must have been filled up and built over, for we found traces of a long room with three columns covering its southern half, one of the column-bases actually overlapping its edge.

It was evident from the first that this house offered, by reason of its various reconstructions, an admirable opportunity for testing a point which we were most anxious to examine, namely the possibility of there having been a settlement on this site before the time of Akhenaten. On the one side we have the king's own statement³ on the boundary stelae to the effect that he built his city in a place which "belonged to no god, to no goddess, to no prince, to no princess," which has been interpreted as meaning that the site was uninhabited before the time of Akhenaten; and on the other hand we have the state-

¹ Further excavation is needed to decide this point.

² This rubbish contained mud-sealings of Akhenaten.

³ DAVIES, *El Amarna*, v, 29.



1. Stratification in House O. 49. 18



2. House O. 49. 18 from the east

ment of Borchardt¹ that "we may no longer assume that Amenophis IV sought out for the foundation of his town an absolutely 'clean spot,' an area which had never been dwelt in." This last opinion is based on the fact that the German excavators found "at some points in the Wādī² traces of earlier building under the stratum of Amenophis IV's time." The traces were slight and no means were found of accurately dating them.

It was therefore of the utmost importance to try to determine the life-history of House O. 49. 18 by excavating beneath its floors. For this purpose two areas were marked out, one in the centre of the North Loggia, clearly seen in Pl. XXVI, Fig. 2, and the other in the east half of the Central Hall, where it was possible to go down without damage to existing walls. In the loggia excavation the following section was obtained, the level of the final brick-flooring of Ra'nūfer's house being taken as zero, and the depths noted in centimetres below it (see Pl. XXVI, Fig. 1):

0—10 Brick floor (A).	100—102 Clean sand.
10—14 Clean sand.	102—104 Mud floor (D. 2, immediately below <i>d</i> in photograph).
14—43 Made earth containing broken brick and potsherds.	104—107 Clean sand.
43—44 Floor of mud (B).	107—112 Thick mud floor (E).
44—55 Clean sand.	112—114 Clean sand.
55—92 Rubbish, mostly broken brick.	114—118 Mud floor (F).
92—94 Floor (C) of mud containing chopped straw.	118—138 Rubbish containing broken brick and potsherds.
94—96 Clean sand and small pebbles.	138 Virgin sand.
96—100 Mud floor (D. 1), without straw.	

This remarkable section was taken one metre south of the centre of the north wall of the loggia. Further towards the centre of the room the strata had been in parts considerably disturbed, and only Floors A, B and E cover the whole area of the excavation. The earliest floor that can be brought into connection with the walls in this part of the house as they now stand is Floor C, all the lower floors having been cut through in laying the foundations of the north wall of the loggia, whereas the plaster of C was taken right up to the wall and rounded off against it. Floor B, however, is of greater importance, for it fixes the "43 cm. level," which is marked by the lower and earlier thresholds of the two doorways leading from the North Loggia into the two small chambers to the west, and possibly also by the earlier threshold in the south door of the West Loggia referred to above.

The excavation in the Central Hall was almost equally fruitful. Here, in the exact centre of the room, we exposed the section:

0—8 Brick floor at same level as A in North Loggia (Floor A).	55—70 Rubbish containing pottery.
8—20 Clean sand.	70—85 Brick floor (Y), very unevenly laid.
20—55 Rubbish with limestone chips and pottery.	85—90 Rubbish and sand.
55 Top of remains of earlier house walls still two to three courses high.	90—92 Thin mud floor (Z).
	92 Virgin sand.

In addition to floors, remains of two walls were also found, one running from east to west, and the other from north to south, together with two limestone column-bases, one of which is probably in its original position. The earliest floor connected with these walls was

¹ *M.D.O.G.*, No. 50, 9.

² The now dry watercourse referred to above, which cut the site in two and destroyed a large number of its houses.

the mud floor Z, which, however, is not found south of the east-and-west wall. The brick floor Y dates from the main period of occupation of the house to which the early walls belonged, for on it rest the column-bases. It seems to have no counterpart in the North Loggia.

It will easily be understood that these sections with their various walls and floors present a very intricate and interesting architectural problem, which can be followed out in all its details only when more of the floor area has been opened up, as it must be next season. Our main object, however, was to ascertain whether any of the earlier walls and floors could be definitely assigned to a date earlier than Akhenaten. With this end in view the floors in the North Loggia, once their succession had been ascertained by section, were slowly worked off by hand, one by one, the objects from between each pair of floors being very carefully separated. The result, when these came to be examined, was unfortunately negative: the finds consisted entirely of rough and mostly very small potsherds. Those which came from under Floor E were quite indistinguishable from those found under Floor A, and not a single piece of distinctive pottery was found at any level. A hieratic ostrakon from a wine jar, found under Floor A, was complete except for the date, which we were unable to recover despite careful search.

This result, though negative, is not without significance. In the first place we have the fact that the pottery from the lowest floor is indistinguishable from that found beneath the uppermost, or indeed from any handful of sherds picked up on the site. Now although no Egyptologist would be unwise enough to claim that he could distinguish a boxful of rough sherds of Amenophis III from a similar boxful of the date of Akhenaten, unless by good fortune certain distinctive types happened to be present, yet we are prepared to say that the sherds from the lowest stratum cannot differ by very many years from those found in the upper, so close is the resemblance. At any rate these earlier sherds have none of the features typical of the pottery of the Middle Kingdom.

In the second place, our section illustrates a fact well known, but often curiously forgotten, that the depth of an archaeological stratum is no test of the time which it took in accumulating. Here we have strata 138 cm. in thickness, containing seven successive floors. These may perfectly well all date from within the reign of Akhenaten, for the space between each pair of floors consists not of natural deposit but of made earth, placed there in order to raise the level. The shallower strata represent merely the replastering of floors (a mud floor easily wears out in twelve months), a little clean sand being first strewn over the old floor to level any unevenness. A thick stratum may represent merely an attempt to raise the floor-level in some part or parts of the house, or it may represent a reconstruction of the wall system. Thus in the Central Hall Floors A and Y belong to separate wall systems, while in the North Loggia Floors A and B, though 43 cm. apart, belong to the same wall system, as an examination of the thresholds demonstrates.

Thus the floor-evidence of House O. 49. 18 does not prove that any building stood on this spot at the moment when Akhenaten founded his new city. Indeed we are inclined to believe that none of the floors are earlier than that moment, though we do not claim to have furnished definite proof of this. At any rate, it will be necessary to accept with extreme caution Borchardt's statement with regard to the existence in the Wâdi of buildings of earlier date than Akhenaten¹. The mere finding of earlier walls beneath those of a house of Akhenaten's date proves nothing, and unless Borchardt can produce from these

¹ See above.

earlier buildings pottery or other objects definitely datable to an earlier period¹ he is not in a position to challenge the king's own claim to have founded his city in a "clean place."

We have dealt at some length with this question because it illustrates so clearly the lines on which our work at Tell el-Amarna is proceeding, and on which it ought to proceed, if the full historical value of the site is to be appreciated. Of the numerous objects found in the course of the excavations in the town mounds the most important are an admirable sculptor's trial-piece (Pl. XXIX, Fig. 4), found jammed in between the walls of two houses which were built up the one against the other, and three bottles of the beautiful wavy-patterned glass of the period, one of which, a unique piece, was in the form of a fish (Pl. XXX). These bottles, together with three vases of silver, were found under the floor of a small room outside House N. 49. 20, where they had perhaps been concealed for safety. Only one cuneiform tablet was found, coming from the rubbish which filled Room 8 of House O. 49. 23; it is written in Assyrian and gives a list of rare woods with articles made from them. The fragments of painted plaster found in various houses have enabled Mr Newton to make some valuable restorations in colour of the schemes of wall-decoration.

II. THE WALLED VILLAGE.

We had been from the first impressed with the importance of finding, if possible, the cemeteries of the humbler inhabitants of the town, which, by the analogy of other sites, might have been expected to lie on the plain in front of the rock-tombs of the nobles. Before, however, proceeding to the very tedious business of trenching the likely area, it seemed advisable to investigate a spot marked "Cemetery" on the German survey. This lies just two kilometres east of our house, on the summit of a low sandy plateau which runs out in the form of a tongue at the foot of the high desert cliffs. It was first discovered and opened in 1907 by the German excavators, who reported that "the burial furniture from the few graves which were opened showed that the people buried in them belonged to the time of the New Kingdom, and that was sufficient for us for the time being²." The graves here referred to are probably the shaft-tombs of which remains are still to be seen on the top of the plateau. We were, however, still more attracted by what appeared to be bricked shafts in a broad and shallow valley which cuts into the west end of the plateau just below this point. The plateau itself forms the meeting-point of several of the very remarkable ancient roads with which the plain of Tell el-Amarna is marked, and on the top of it are a number of rectangular stone enclosures whose nature demands clearing up. A small force of men was therefore moved up to this site on Feb. 18. A few strokes of the pick sufficed to show that the supposed shafts were not tombs at all, but rooms of houses, and, what was more important, the appearance of objects of wood, cloth and matting in good condition showed that, unlike the town mounds, this site had been spared by the white ant. We might thus hope not only to obtain light on the roofing of the houses and other wooden portions of their structure, but also to find objects of domestic type in a good state of preservation. We therefore started to clear two separate houses.

We had been puzzled by the straight ridges of sand which seemed to bound this little valley settlement on its four sides. Excavation immediately showed that they concealed walls, and that our settlement was an enclosed village. The walls were 80 cm. thick, and, at

¹ *M.D.O.G.*, No. 50, 9: "Allerdings fanden sich keine Anzeichen, die eine genauere Datierung der Reste ermöglichen."

² *M.D.O.G.*, No. 34, 29.

some of the points at which we tested them, still stood over a metre in height. The main gateway is in the south side and is about a metre and a half in breadth. Outside is a paving formed of very rough rounded slabs of limestone. The threshold consists of a single block of the same stone, and, at the right-hand side as one enters, a small flat block of wood, with a small cup-shaped depression in its centre, is let into the stone to form a bed in which the vertical pivot of the door may turn. A similar arrangement was observed in one of the rooms of House 511. The intention was doubtless to provide a smooth bed for the wooden door-pivot, which, if it turned on stone, would rapidly wear out under the heavy friction. At some period the village had been enlarged on its west side, the newly added portion being walled in like the old. In the extension of the south wall thus necessitated is another doorway, which has been partly blocked up with stones. Within this has at some time been built a rough barricade, which still remains to be fully excavated, and which may bear witness to an interesting historical event.

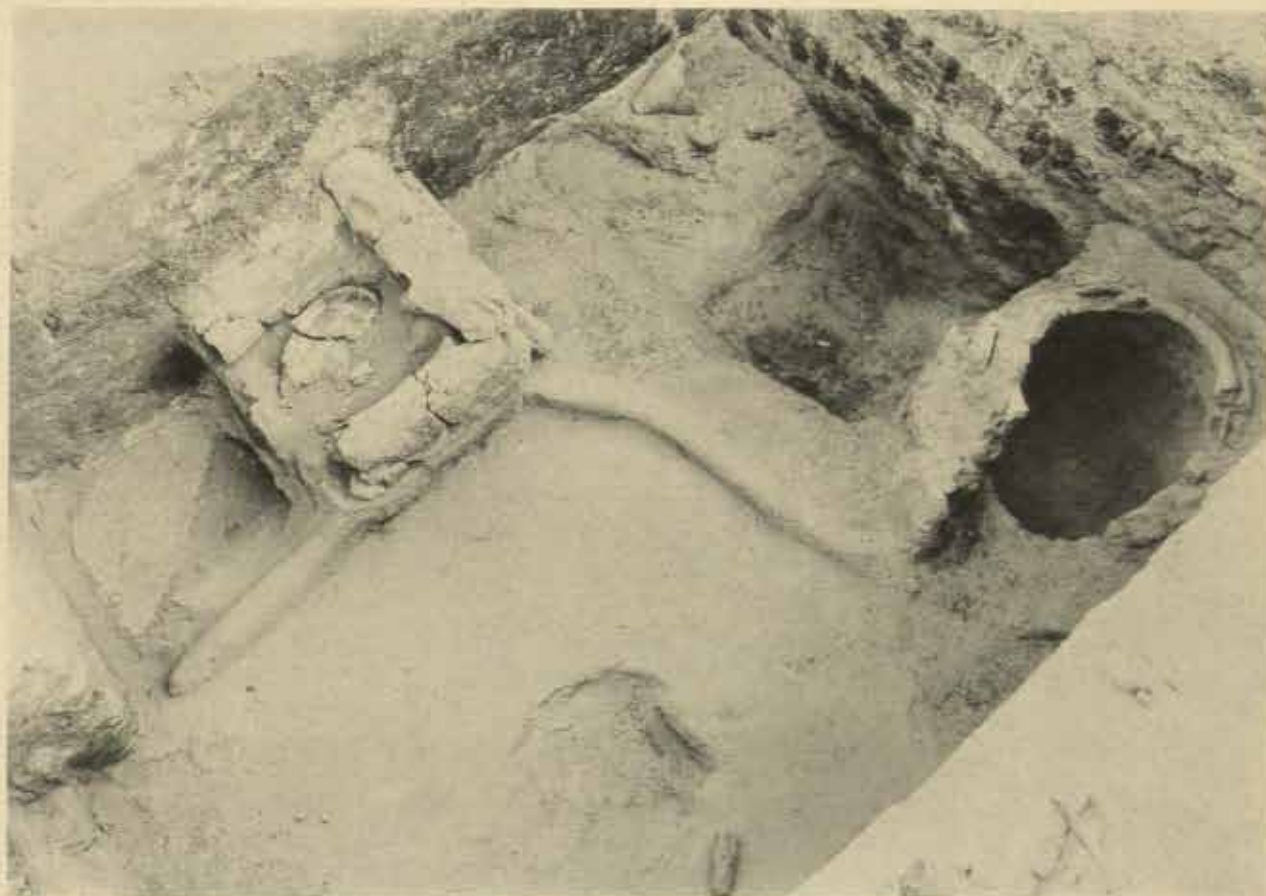
At an early stage in this excavation we were faced with serious difficulties with regard to the disposal of the excavated sand. To tip west or north would have meant running uphill, the small available space to the east was already sorely needed for the dumps from the excavation of the tomb-chapels on the hillside above, and to the south lay rubbish heaps from the village itself which could not be covered until completely searched. It was clear that this village could be satisfactorily excavated only with the help of a light railway, and as we had none on the spot, we decided to regard our work here merely as a trial, and to devote our time to the tomb-chapels on the hillside, which, as they were but lightly covered by sand, would be much more liable to attacks by plunderers during the coming summer.

The complete and systematic excavation of this village must undoubtedly form part of the Society's work one season. Not only will it yield considerable quantities of domestic objects of a kind too seldom found in Egypt, but it may, if the barricade prove not delusive in its promise, furnish important evidence as to the history, and perhaps more particularly the end, of the Akhenaten heresy. It will be necessary first to trench thoroughly the open mouth of the valley, to find a suitable place for tipping, next to clear the rubbish heaps which lie outside the town gate, and finally to run perhaps two short parallel lines of light railway from the town on to the ground thus cleared. The village and its walls, when thus laid bare, will, taken in conjunction with the remarkable series of tomb-chapels which lie on the hillside above, form a monument unique in Egypt.

It is as yet too early to say much about the arrangement of the houses themselves. We have excavated only about a dozen small rooms in all, and, until the work has gone further and planning is feasible, we can hardly say even to how many separate houses these rooms belong. One thing, however, the excavation has settled, and that is the detail of the roofing. In the great town mounds both we ourselves and our predecessors were left to infer the nature of the roofing material from occasional slabs of dried mud with imprints of reeds or twigs, not a fragment of wooden material having escaped the white ant. In the village, however, the roofing, though it has fallen in, is preserved almost complete (Pl. XXVII, Fig. 1). Beams consisting of quite rough tree-trunks were first laid across from wall to wall. These were covered with twigs or reeds laid at right angles to the beams. Next came a layer of matting made of *halfa*-grass, *ferst*-reed or palm-fibre, and finally a layer of mud from 5 to 15 cm. in thickness. This system still prevails in Egypt, though in the poorer houses it is sometimes replaced by a mere thatching of maize stalks. In Syria, too, the same



1. Remains of roofing. House 501



2. Kitchen in House 501

arrangement is found, except that there, owing to the prevalence of rain, the mud layer is made thicker, and is rolled out after each shower with a stone roller kept on the roof for this purpose¹. The roofing of the houses in the main town itself was undoubtedly of the same nature, though perhaps more carefully and accurately carried out. Since, however, many of the rooms, notably the central halls and the loggias, were too broad to be conveniently roofed in a single span, the introduction of wooden columns with stone bases became a necessity.

Large numbers of objects of domestic use, mostly made of wood, were found in the portions which we cleared. Thus, in a passage outside House 511 was a complete bed, lying upside down. The framework was of wood and the cover of finely woven *halfa*-grass. Unfortunately it was in poor condition and crumbled away immediately when exposed to the air, so that it was impossible to remove it. The largest room in House 511 contained the fragments of a loom, which no doubt was supported by the two slotted limestone blocks which lay near the centre of the floor. The main wooden framework seems to be missing, and it is therefore difficult to assign to their places in the machine the various pieces of wood found in the room, or even to be certain in some cases whether these belong to the loom at all. About one object there can however be no doubt. It is part of a warp-spacer supposed to have served to keep the threads of the warp in position during the process of warping.

In the same room were found large numbers of spindles, and in the wall on the other side of the street outside are holes at various heights, into which had originally fitted wooden pegs which were found lying below. The purpose of this arrangement is explained by a glance at one of the wonderful wooden models found last season by the excavators of the Metropolitan Museum of New York in a tomb at Dêr el-Bahri, where women engaged in spinning are seen winding the thread off the spindles on to pegs fixed in the wall of the weaving room. In many Egyptian villages this is still done to-day. On the north wall of the room which contained the loom was a frieze in white paint on the grey mud, showing three figures of Bes one behind the other. The north wall of the adjoining room shows beneath its present plain colour-wash the remains of at least two separate layers of painted designs. It may be possible next season by patiently flaking off the upper coat to disclose these, but it will be a slow business, and, as it was too near the end of the season to attempt this, we have built up a wall in front, at about 30 cm. from the painted face, and filled in the intervening space with clean sand in order to preserve the designs.

In another house, 501, was found a kitchen in an admirable state of preservation. Plate XXVII, Fig. 2 is a view of this taken from above its south-west corner. In the foreground is the very confined space in which the cook was free to move about. This was divided off from the rest of the room by a low wall of mud, not more than 10 cm. high. On the extreme right is seen the oven, a cylindrical vase of rough pottery, open top and bottom, with a small aperture for stoking at its south side on a level with the floor. The breadth of these ovens varies from about 30 to 50 cm. and their height is often more than a metre. In this oven was found in fragments a rough flat dish of the coarsest pottery with a low ridge round it. In this the bread appears to have been placed for baking. The diameter of the dish is less than that of the top of the oven, and we must therefore assume that a fire was lighted in the oven, and that, when this had died down to a red glow, the

¹ I owe these facts to Mr Guy.

trays of dough were introduced from above, perhaps one on top of another, and a cover placed over the top of the oven¹. In the north-east corner of the room, i.e. in the background of the picture, lay the bottom of a pottery vase, and under it a store of unused fuel, consisting mainly of straw and sheep-dung. This last is still commonly used for fuel, and is said to retain a glow longer than any other. Beside the stoke-hole of the oven lay a charred stick which had clearly been used as a poker.

In the centre of the north wall lies a curious structure of bricks which was badly damaged, but which we succeeded in reconstituting from its fragments. It is a solid block or pedestal of brickwork about 30 cm. high, in the upper face of which are two basin-shaped depressions side by side, one narrower than the other. The whole upper surface is white-washed. It is not easy to guess the purpose of this piece of furniture. It can hardly have served for mixing dough on, since the whitewash and the mud brick below it would have been melted by the water. The workmen were very anxious to find a basket such as is now used for cooling the loaves in, to prevent their giving off their heat too rapidly and thus becoming heavy; such a basket was in effect found in the adjoining room, and was of the type shown in Pl. XXIX, Fig. 2. In this same room, near the door leading into the kitchen, was a hearth placed against the south wall and bounded on each side by a couple of bricks placed one above the other. On this hearth, which still contained ashes, was done the cooking, as opposed to the baking. A cooking-pot of a type which has persisted until modern times was found in the room. Among the various other kitchen utensils found in these houses was the perfect little flour sieve shown in Pl. XXIX, Fig. 1. The edging is of twisted *halfa*-grass and the mesh of gut.

What are the date and the purpose of this enclosed village? With regard to the date it is significant perhaps that not a single dated object of the reign of Akhenaten was found, while ring-bezels of his immediate successors, Sakerē² and Tutankhamūn, occurred both in the village and in the rubbish mounds outside the gate. There is therefore a distinct probability that it was founded after the death of Akhenaten, though this may easily be upset by future excavation.

What was its purpose? Here again it seems foolish to make any suggestion until excavations on a larger scale have been undertaken. It does, however, seem difficult to suppose that this place formed a military outpost for the city of Akhetaten, like those which lie to the north and south³ and command the only entrances to the great plain. Our village does not occupy a strategic position. It does not command the mouth of either of the great desert valleys, and it lies itself in a valley surrounded by hills which would form admirable vantage-ground for a force attacking it. Indeed it is hard to see how anyone who took the trouble to surround a village with a wall could have placed it in such a poor defensive position.

We thought at one time that it might have formed the quarters of the workmen employed in connection with the cemeteries and the tombs of the nobles, but in this case it is difficult to see the reason for the enclosure. Another idea which suggests itself, though it is perhaps too fanciful, is that it formed a last stronghold of the Aten religion when the great city of Akhetaten was destroyed and deserted on the restoration of the orthodox worship of Amūn. But it is foolish to conjecture when excavation and excavation alone can solve the problem.

¹ See, however, *M.D.O.G.*, No. 50, 17-18.

² *M.D.O.G.*, No. 34, 17-20, and Fig. 11.



1. Shrine of Tomb-chapel 524



2. Tomb-chapel 522

III. THE TOMB-CHAPELS.

On the second day of the trial excavation in the foot-hills, the group of workmen placed furthest to the east found walls which, unlike those within the enclosure hard by, obviously could not belong to houses. It very soon became evident that what we had to deal with was simply tomb-chapels of a very unusual type. There were remains of seven or eight of these on the slope of the hill to the east of the village, and they extended round a corner on to the north slope of another valley which joins the first from an easterly direction. Some of them actually lay in the shallow bottom of this second valley.

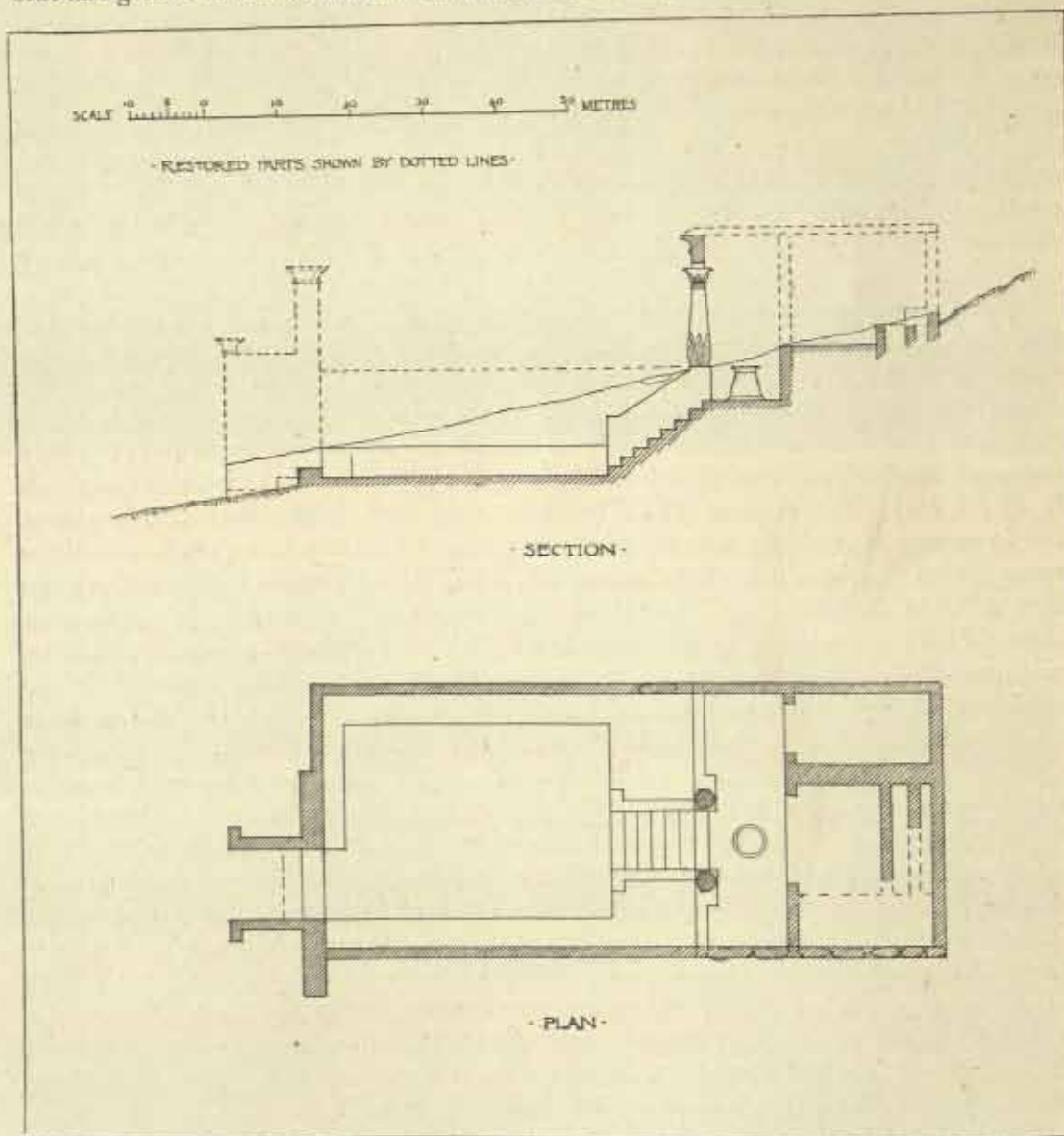
The material used was almost entirely mud brick, though in some of the foundations and outer walls large rough pieces of limestone, which abound in the valleys, had been employed. In several cases, too, the outer court or precinct had been lined out with one course of such stones. The difficulties of construction on a rather steep slope had been overcome partly by cutting back into the soft rock, partly by artificial terracing.

These chapels varied slightly in plan. The essential features always present in the larger examples were an outer court, an inner court, and a shrine with niches. The outer court was probably bounded only by a low brick wall; indeed, in some cases it was merely marked out by lines of rough stones, but, like all the other parts of the building, it had a flooring of mud plaster. The inner court lay immediately behind the outer, and invariably had a low bench of plastered mud brick running round its walls on the inside, clearly seen in Pl. XXVIII, Fig. 2 (Chapel 522). The shrine is the most variable part of the building, but in essence it is simply a rectangular room lying behind the inner court, sometimes entered from this by a pylon-like doorway (Pl. XXVIII, Fig. 2)¹, and having niches in its back wall. In the floor of the shrine there is generally a dais one brick in height in front of the niches (visible through the doorway in Pl. XXVIII, Fig. 2), and in addition to this a small pedestal of limestone opposite the centre of each niche, possibly intended for the officiating priest to stand on. These pedestals are very clear in Pl. XXVIII, Fig. 1, which is a view of the shrine and niches of Chapel 524 taken from the inner court. From the same figure a good idea of the niches can be obtained. In this case they are three, though in other shrines they varied from one to four, the centre niche being placed rather higher than the other two. The side-posts of the niches are rebated, perhaps to take a wooden shutter. At the back of the niche, at a height of only 38 cm. from its floor, the wall comes forward in a cavetto cornice (very clear in the right-hand niche in the photograph), and then recedes again to form a sort of shelf in the back of the niche. This shelf runs back for 50 cm., and, despite the ruined condition of its walls, can be traced upwards to a height of at least 20 cm. Thus each niche forms in structure a kind of step. In the centre niche of Chapel 524 is a small brick pedestal, visible in the photograph. No objects were found in the niches, but in 524 a number of whitewashed pottery vases were found on and near the dais below. These are shown in position in the photograph.

With regard to the roofing of these buildings all is conjecture. The outer court, and probably in some cases the inner one too, was open to the sky, and the comparative lowness of the walls here is not merely due to greater denudation. On the other hand, in the inner court of 528 were found traces of square brick columns, which perhaps formed a colonnade on the two sides of the court. The shrines may have been partly or even wholly roofed. In 525 the shrine lay on a higher level than the inner court, from which it was reached by

¹ Note the wooden threshold visible in this view.

a flight of eight steps (see Fig.); it was so shallow that it formed a mere raised platform in front of the niches. On each side of the top of the steps had stood a short column of mud, brightly painted, which had supported an entablature inscribed with an ordinary *hṯp dī nīswt* prayer to Amūn in black on white surmounted by the usual cavetto cornice in white, red, blue and green. It is clear then that this shrine, or rather platform, was roofed. The amount



Reconstruction of Tomb-Chapel 525, Tell el-Amarna.

of painted plaster and other material found was sufficient to enable Mr Newton to make a restoration of the whole which admirably brings out the harmonious proportions and attractive colour scheme of this chapel. It should be added here that, apart from the coloured portions just referred to and a few coloured fragments in three other shrines, the whole of the brick surface in all the chapels was whitewashed.

A tomb-chapel implies a tomb, and no sooner had we satisfied ourselves as to the funerary nature of the chapels than we had groups of men clearing the slopes above the chapels for the tombs which might reasonably be expected to lie there. In this we were not altogether successful. The tombs connected with the finer chapels, with the exception of 525, have not yet been found, and, though the search for them is not yet quite complete, we are inclined to suspect that some of them were never made, or that, if made, they lie at a considerable distance from their chapels. The tomb connected with 525 lay some fifteen metres higher up the hill. It was a vertical shaft, with rough steep steps in its east side, and a small ill-shaped chamber opening off to the west. The bricking of the doorway had been removed and replaced, and we were therefore not surprised to find the chamber nearly full of sand. Upon this, just inside the door, lay the body of a small child lying on its back, head to east. On clearing out the sand it was found that the original body had been removed, for nothing remained but some fragments of wood and a series of pottery vases, mostly broken.

On the other hand we sometimes found tombs to which we could assign no chapels. This was particularly the case in the north portion of the main valley. Here were several tombs whose chapels, which ought to lie further down the slope, were not to be found. In several cases these tombs were unfinished, the shaft having failed to find the firm rock necessary for the safe cutting of a chamber. In other cases the chapels were represented only by a few scattered bricks. In all we cleared nine tombs, four of which were unfinished, and the total yield amounted to some broken pottery and a number of animal bones. It is true that several of these tombs have been plundered in comparatively recent times, but the complete lack of human bones (if we except the intrusive skeleton of the child in 525) leads one seriously to wonder whether the bodies buried in these graves were not removed by pious relatives to Thebes after the fall of the heresy and the abandonment of Akhetaten.

What is the date of these tombs and their chapels? At Tell el-Amarna one becomes with Akhenaten a "heretic," and it was almost a shock to us when in Chapel 529 we found a fragment of a painted limestone door-post bearing an inscription containing the name of Amūn. The context was, however, damaged, and it was impossible to say in what connection the hated name had stood. The excavation of the inner court of Chapel 525, however, left no doubts on the subject, for the entablature supported by the columns had been inscribed with a *ḥtp dī nīswt* prayer to Amūn, which it was possible to restore in its entirety. The titles "the good ruler eternally, lord of heaven, who made the whole earth" are certainly bestowed by no half-hearted worshipper.

We were still wondering whether these chapels must not be attributed to an earlier date than that of Akhenaten, and how such a supposition could possibly be reconciled with the evidence of the town mounds of Akhetaten itself, when a fresh discovery suggested a different explanation. Leaning against the back wall of the raised shrine of the chapel (525), but probably not in their original position, were found two limestone stelae. The smaller had nothing more on it than a painted figure of the god Shed with his name and titles. The larger was roughly inscribed and painted (Pl. XXIX, Fig. 3). It bears on the front *ḥtp dī nīswt* prayers for a certain Ptahmay to the deities Shed and Isis. This representation of the rare god Shed, the protector against the bites of venomous creatures¹, is

¹ See *Journal*, IV, 239; *Zeitschr. f. äg. Spr.*, 49, 125; ERMAN, *Die äg. Religion*, 91, 180; *Ann. du Service*, XVI, 175.

in itself interesting. He carries the bow in his left hand, and in front of him is a scorpion surmounted by two arrows. But the most important detail of the stela lies on the sides, which, like the front, are inscribed and painted. Here Ptahmay is seen seated in a chair, and his sister is bringing him food and drink with the words "To thy *ka*! O praised one of the Aten." The difficulty hardly needs pointing out. It is generally understood that Akhenaten and the inhabitants of his city worshipped only one god, the Aten, or sun's disk, and yet here is a man who calls himself the "praised one of the Aten" making his funerary prayers not to Aten but to Shed and Isis. There seem to be only two possible explanations, either that Akhenaten, though he may have been a monotheist himself, did not force monotheism even on the inhabitants of his capital, or else that the stela dates from some moment in a transition stage from the Aten heresy to the restoration of Amūn worship. The former is not a very probable hypothesis. Akhenaten might have allowed the worship of Shed and Isis among his subjects in the capital, but he would certainly never have allowed Amūn or any other god but the Aten to be called "lord of heaven, who made the earth." We are therefore thrown back on to our second supposition, namely that the chapels date from the transition back to Amūn worship. We have at any rate gathered a fact of very great importance for the history of the Aten worship, namely that the return to orthodoxy was not sudden but gradual, and further that Amūn was in part restored before the complete desertion of Akhetaten.

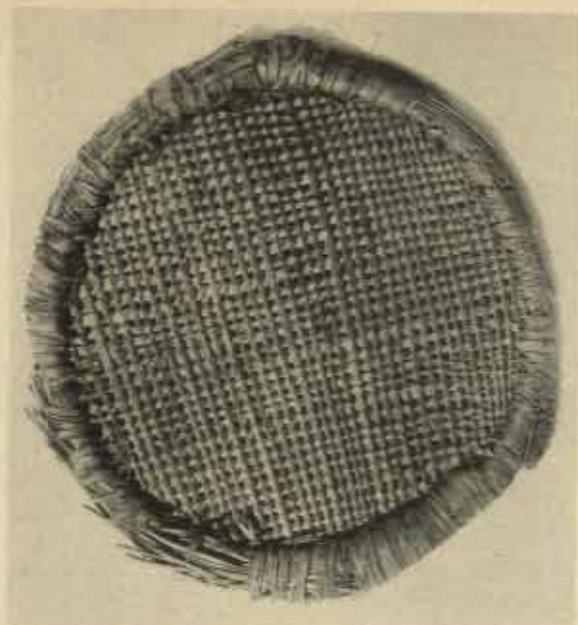
Fortunately the chronological evidence of the chapels is by no means exhausted. On the last day of the excavation we came upon the back wall of a large chapel placed in front of 524. Under the wall lay what appeared to be an earlier construction with a different orientation. This seemed to raise possibilities of dating which could only be adequately dealt with by slow and careful investigation. We therefore photographed the newly discovered wall and covered it again, leaving its excavation and that of the new chapel to next season. It will also be necessary to carry out extensive excavations under the chapel floors, and among the made earth of which the terracing consists. We did, indeed, make some trials on a small scale, but found no objects definite enough in date to give a *terminus a quo* for the construction.

IV. THE PALACE WASTE-HEAPS.

In 1891 Prof. Flinders Petrie excavated at Tell el-Amarna a building which he called, doubtless rightly, the palace of Akhenaten, and which the German excavators, on evidence as yet unpublished, believe to have been built into the great Sun-temple¹. "About three furlongs" east of the palace Petrie discovered a group of waste-heaps on the desert, covering an area of "about 600 feet by 400 feet" and varying in depth "from 4 feet to a mere sprinkling²." These he believed to be the rubbish-heaps belonging to the palace and other large houses in the neighbourhood. The contents of these heaps are well known to archaeologists. They comprised small objects inscribed with the royal names of Tuthmosis III (a few), Amenophis III (a few), Akhenaten, his family, and his immediate successor Smenkhkērē, quantities of broken glass, and nearly 1500 pieces of painted pottery of the type then known as Mycenaean, not to mention thousands of native Egyptian potsherds. Since the town of Akhetaten was, on fairly sound evidence, believed to have lasted no more than about twenty-five years, from 1375 to 1350 B.C., it seemed a logical inference that these Mycenaean potsherds should be dated to that period. At the time this dating

¹ *M.D.O.G.*, No. 34, 29.

² PETRIE, *Tell el Amarna*, 15-16.



1. Sieve of rushes and gut



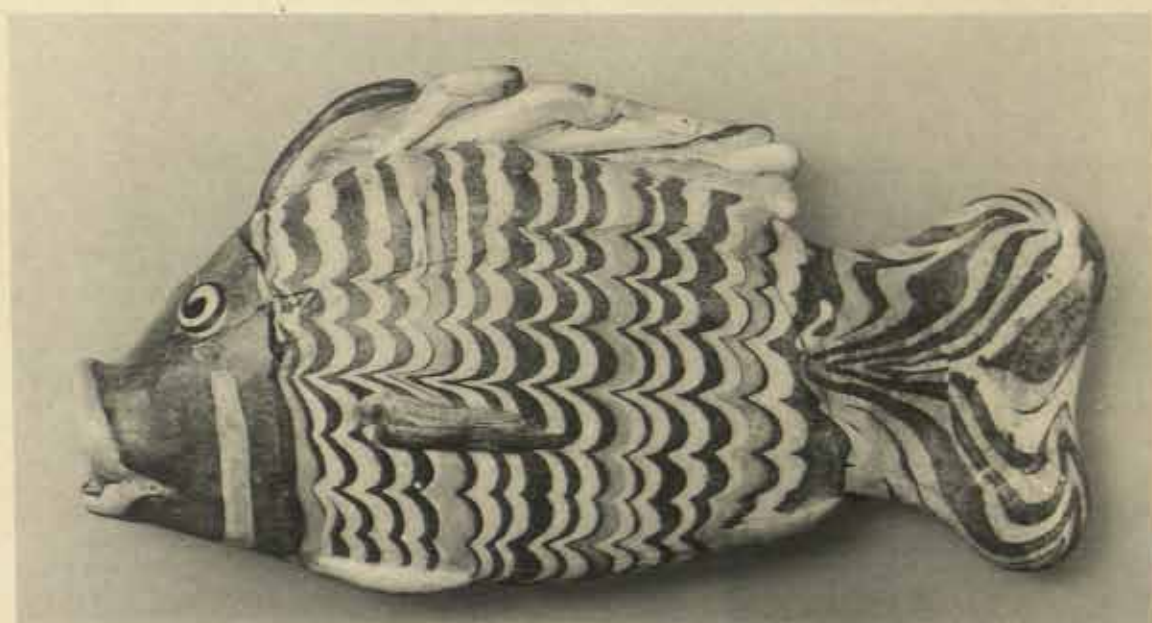
2. Reed-basket



3. Stela of Prahmay



4. Sculptor's trial-piece



TELL EL-AMARNA. VASES OF VARIEGATED GLASS

presented no difficulties from the Aegean side; but within ten years followed Sir Arthur Evans' discoveries in Crete, which showed, among other things, that the pottery previously known to us as Mycenaean was simply a late development of a ware which in Crete could be traced back to very early beginnings. The "Aegean" pottery of Tell el-Amarna thus ceased to be a semi-isolated phenomenon and took its place in a series. With this the difficulties began, for these sherds not only date to the Third Late Minoan period, but they date to the last phase of that period, namely that known as Late Minoan III b., represented by certain vases from Palaikastro and elsewhere in Crete, from sites on the Greek mainland, from the Ialysos tombs in Rhodes and from various graves in Cyprus. Sir Arthur Evans finds the greatest difficulty in admitting that pottery of this late and decadent type should be dated as early as 1350 B.C., partly because similar ware is found in Cyprus in conjunction with scarabs of Ramesses II, who reigned a full century later, partly because to place it so early would allow a very short time for the development of the earlier phases of the Late Minoan period.

Sir Arthur therefore suggested to us before we went out that we should re-examine these mounds with a view to the possibility of their connection, not with the palace of Akhenaten's own time, but rather with a reoccupation in later days of this or other buildings on the site.

An examination of the mounds soon revealed the fact that not much remained to be done there. Their original form is no longer recognizable, the work of Petrie's sifters having transformed them into a group of small sharp heaps. We did, however, sift certain portions which seemed to have been missed. We found no object which suggested any date other than that of the Akhenaten period, despite the fact that in addition to sifting we spent hours wandering about the heaps in the hope of picking up among the thousands of fragments lying on the surface some object or potsherd definitely assignable to a later period. The one inscribed object which we found bore the name of Akhenaten's queen, and in the immediate neighbourhood of this were found a fine piece of glass, typical of the period, and four sherds of Aegean pottery, all of which were of type L. M. IIIb.

In fact, our re-examination gives no ground whatever for refusing to accept Petrie's conclusion that the waste heaps are those of Akhenaten's own palace, and that therefore this pottery must be dated to 1375—1350 B.C. It is true that this evidence is in a sense negative, but it is cumulative, for, while we have about a hundred objects with royal names not later than 1350, we have not a single object with a name of later date. Similarly with regard to uninscribed objects: while every object found could perfectly well be dated to this early period without violating any of the teachings of experience, there was not one piece which demanded or even suggested a later date for itself.

Turning now to evidence of another type. If the site of Akhetaten was ever reoccupied by people of sufficient standing or importance to be likely importers of Aegean pottery, we should expect to find the signs of this reoccupation in some of the houses. As far as concerns the portion which we ourselves dug, it may safely be said that there was no trace of anything of the kind. To this it may be replied that the part excavated by us is but a small fraction of the whole. This is true. At the same time it must be remembered that Petrie, who cleared a considerable number of houses in that part of the site nearest to the palace waste-heaps, records no trace of reoccupation earlier than Roman times, except the names of Ramesses II and Merenptah in Quarry L¹.

¹ PETRIE, *Tell el Amarna*, 4.

On the other hand the German excavators discovered some traces of later occupation which must be seriously taken into account. A mound near the south-west corner of El-Ḥāg Kāndil was found to cover a building of some size "in the erection of which had been used not only building material from private houses of the time of Amenophis IV, but also stones from what must clearly have been a palace- or temple-structure of the later Ramesside period¹."

Our predecessors also found some stelae of the late New Empire (they do not tell us where), and in the garden of House P. 47. 5 a coffin of about the Twentieth Dynasty buried at a slight depth. "At this time," adds Borchardt, "the outer quarters of the town with their ruined houses thus seem to have served on occasion as a cemetery for the inhabitants settled in the central portions²."

The clay sarcophagi and statuettes found by the Germans in various houses³ are probably far too late in date to affect the question of the Mycenaean pottery.

Taken in its entirety this evidence shows that from time to time the old city was in part reoccupied, and the stones from the late Ramesside palace or temple even suggest a reoccupation of some importance.

The most satisfactory solution of the problem would have been to find Aegean vases of the type in question definitely associated in floor deposits with objects of known date, either that of Akhenaten or later. From the outset we realized that this was most unlikely. Borchardt has rightly emphasized the rarity of Mycenaean sherds in comparison with Egyptian even in the royal waste-heaps, and we were not altogether surprised when at the end of the season our collection of Mycenaean sherds from the houses totalled four, despite the fact that we had kept a special watch for them. Of these four fragments two were found, not in houses, but on the ground outside, while the remaining two were found in the midst of the usual mass of sand and rubbish in House N. 49. 12, Room 6, and House N. 49. 10, Room 15, respectively. From this it is obviously impossible to argue anything at all, though on the negative side it should be clearly understood that nothing was found in or near either of these two houses to make us suspect a date later than that of Akhenaten.

The conclusion may be stated as follows. There is evidence to show that after the great desertion Akhetaten was from time to time sporadically reoccupied. This offers a tempting way out of the chronological difficulty presented by the L. M. IIIb potsherds, namely to attribute them to one of these reoccupations. But this course, if accepted, involves a most serious logical difficulty. Here are certain rubbish mounds which contain thousands of fragments of glass, faience and pottery, some of which are dated by inscription or style to the reign of Akhenaten or thereabouts, while not a single fragment demands or even suggests for itself a later date⁴. From these heaps, mixed up with the fragments just described, come

¹ *M.D.O.G.*, No. 50, 8-9. It is difficult to follow Borchardt in the conclusion which he draws from this excavation, namely that "the town must, although only at isolated points, have continued to be occupied *continuously* after the main body of the inhabitants, namely the rich and the officials, had deserted it after the restoration due to King Horemheb." The existence of a late Ramesside palace, and of a later building constructed out of its ruins, hardly proves as much as this. The Ramesside blocks may even have been brought from some little distance. The argument for continued occupation based on the modern road from Et-Till to El-Ḥāg Kāndil (*ibid.*, p. 11) is surely a *non sequitur*.

² *M.D.O.G.*, No. 52, 8-9.

³ *M.D.O.G.*, No. 46, 29-30.

⁴ No one who knows Egyptian pottery will need to be told that some of these sherds might just as well be Nineteenth or Twentieth Dynasty as Eighteenth. But while some must be Eighteenth Dynasty and cannot be later, there are none which must be Nineteenth or Twentieth and cannot be earlier.

some 1500 sherds of L. M. III b pottery. If these are not contemporary with the rest of the rubbish we have to suppose that the reoccupiers of Akhetaten who imported them carefully carried their cracked or broken Mycenaean vases to the old disused waste-heaps of Akhenaten's palace, but shot all the rest of their rubbish elsewhere.

Archaeology is not an exact science, and it is seldom that its conclusions are capable of rigidly logical proof. More frequently it deals in possibilities and probabilities. So it is in our case. Excavation has not up to the present proved that the L. M. III b sherds at Tell el-Amarna are contemporary with Akhenaten. It has, however, in our opinion at least, established a strong probability that this is the case, and we should be doing less than our duty did we refuse to record this belief, whatever difficulties it may seem to lead to on the Aegean side. It is not for us to suggest a solution of these difficulties. Were this task imposed on us, however, we should be inclined to ask the Aegean archaeologists to consider the possibility that this L. M. III b ware was already being made in some outlying portion of the area of Minoan influence at a time when the potters of Knossos were still producing the more elegant ware of L. M. III a.

THE NAME OF THE SCRIBE OF THE LOUVRE

By JEAN CAPART¹.

THE squatting Scribe of the Louvre Museum (Pl. XXXI, Fig. 1) certainly divides the honours of general admiration with the "Shêkh el-Beled" of the Cairo collection. Wherever Egyptian art is discussed, the mention of these two masterpieces is absolutely inevitable. Nearly everybody knows that we owe them both to the excavations of the illustrious Frenchman, Mariette-Pasha, whose centenary is being celebrated this year. I have endeavoured, in a previous article², to clear away certain obscurities prevalent with regard to the Shêkh, and may be permitted to deal this time with the Scribe of the Louvre.

Of this statue, also, the statement holds good: it has been reproduced everywhere, it has nowhere been properly published; and the bibliography of the Scribe—I mean, of course, the bibliography of scientific studies—is of the most meagre.

In a notice, probably the most detailed one that has appeared, drawn up by Maspero in Rayet's work³, we read that "it was found in the tomb of Skhemka, in 1851, by Mariette, during the trial diggings that preceded the discovery of the Serapeum." This statement is repeated in Maspero's great history⁴, where the author adds, "it comes from the tomb of Sekhem-ka and represents this person." It may be seen at once that the problem to be solved is a double one: (a) where was the Scribe of the Louvre found? (b) whom does it represent?

Let us endeavour to get back to the original sources which inform us as to the excavations of the Serapeum. On the 2nd October, 1850, Auguste Mariette landed in Egypt, commissioned to obtain Coptic manuscripts. A credit of 6000 francs had been placed at his disposal. We know how, delayed in Cairo by red tape and tempted by his adventurous genius, Mariette decided to lay bare the secret of Sakkarah's sands⁵. In the detailed account of the excavations published after his death by Maspero⁶, we find, under the dates 1st November, 1850 to 1st January, 1851, the description of the uncovering of the famous Avenue of Sphinxes of the Serapeum. "From the commencement of the excavations," he wrote, "I had perceived that the Avenue of Sphinxes was bordered on both sides by tombs belonging to private persons. In some cases these tombs have no communication with the Avenue; and these are, generally speaking, very ancient, since for the most part they go back to the Old Kingdom; in other cases they have a façade turned towards the Avenue, with which they are connected by a communicating door. These are the most modern...." "Two of the tombs adjacent to the Avenue particularly arrested my attention. The first is situated north, and belongs to the Old Kingdom. It has been devastated from top to bottom, and it was only with great difficulty that I reconstructed its original plan. Five painted statues were found in the rubbish, into which they had been thrown pell-mell; the

¹ This article has been translated by Mr Battiscombe Gunn.—Ed.

² *Journal*, vi, 225 foll.

³ RAYET, *Monuments de l'Art antique*, i, Pl. 2, reproduced with some unimportant modifications in MASPERO, *Essais sur l'Art égyptien*, 53-7.

⁴ *Histoire ancienne*, i, 409, note 1.

⁵ See MASPERO, *Notice biographique de Mariette*, in *Bibliothèque égyptologique*, vol. xviii, pp. xxviii foll.

⁶ MARIETTE, *Le Sérapéum de Memphis*, 7 foll.



1



2



3



4

PORTRAIT-STATUES OF THE OLD KINGDOM

1. The Scribe of the Louvre 2. Statue of Kai (Louvre A. 106) 3, 4. Statues in the Cairo Museum

pieces of these, which fitted together, were carefully gathered up and put aside. Two niches, hidden in a wall which had not been completely overthrown, were opened. We found in them two admirable statues in their original positions. They are of limestone. The bare flesh is painted red, the hair black, the short kilt (shenti) white. The eyes are set in envelopes of bronze which take the place of the eyelids. In the middle of the eyes, formed of pieces of opaque blue quartz, are fixed small disks of rock-crystal, which give to the pupils thus represented an extraordinary living power. I had the shaft cleared; at the bottom we found only a coarse sarcophagus of greyish limestone, already robbed" (p. 11). And Mariette adds in a footnote: "The seven statues thus discovered are now in the Louvre. One of the two statues with inlaid eyes is the famous squatting scribe, the exhibition of which caused such a lively emotion in the world of artists and archaeologists. Towards the latter period of the Serapeum excavations I again put some workmen on to the rubbish where these monuments had been recovered. The disorder is so great that I cannot state positively that this débris does not belong to several tombs. Anyhow, nothing new was discovered."

Mariette's statements seem fairly precise: on the one hand there were in the midst of the rubbish, thrown pell-mell and broken up, five painted statues, and on the other hand there were in two niches hidden in a wall which had not been completely overthrown, and in their original positions, two limestone statues, one of which is the famous Scribe. It is further seen from the footnote, that the confusion of the ruins was such that Mariette is unable to affirm that all these statues belonged to one and the same tomb.

In the biographical notice of Mariette cited above, Maspero, describing the slow progress of the excavations which were to lead to the entrance of the Serapeum, writes: "At the least he unearthed to right and left tombs of the Memphite Kingdom which enriched him with interesting monuments. One of them contained seven statues of painted limestone, which are now in the Louvre. Six have no great merit, but the seventh is no other than the famous squatting scribe¹." I fear that we already have here, in this new manner of setting forth the facts, a regrettable confusion which has certainly contributed to obscure the problem. For Maspero speaks of seven limestone statues which he separates into two groups: one of six, not very remarkable, and the other constituted solely by the famous Scribe.

The first task incumbent on me is clearly to inquire which are the statues that have just been spoken of. With this object, let us examine the old catalogues of the Louvre. I have not at hand the first edition (1849) of E. de Rougé's *Notice*². In the second, dated 1852, the description of the statues (classified under the letter A) stops on page 43 with No. 101. In the eighth edition, published without date and apparently a mere reimpression of preceding editions, a supplement, commencing at p. 47, first of all repeats No. A. 101, which figured already in the 1852 edition. No. A. 102, which follows, is described as being a "limestone group, painted all over, of Sekhem-ka accompanied by his wife and son. This fine group, of the end of the Fifth Dynasty, comes from Mariette's excavations at Sakḥāreh."

A. 103 is also of Sekhem-ka; de Rougé says: "this figure and the three following numbers come from the same tomb as the preceding one." A. 104 and A. 105 do actually also represent Sekhem-ka. A. 102 and A. 103 are of limestone, while A. 104 and A. 105 are of pink granite and of diorite respectively.

¹ Pp. xxi-xxii.

² *Notice des Monuments exposés dans la galerie d'antiquités égyptiennes.....au Musée du Louvre.*

the present case that statue A. 106 and the Scribe both represent one and the same personage, and that statue A. 106 affords us, through its inscription, the name of the Scribe?

But, it will be said, is it possible to believe that among the statuary forms adopted as common variants, the pair of types was employed which occurs here—a man seated on the ground with crossed legs, in the act of writing, and a man seated on a cubical seat? I ask permission to refer the reader to an example given us by M. de Morgan's excavations in the burial-ground of Saqqâreh. Maspero has described the new Scribe of the Cairo Museum¹, and has related the circumstances of the discovery as follows:

"The excavations carried out by M. de Morgan in the northern part of the burial-ground of Saqqâreh have recently brought to light a mastaba of beautiful white stone near the tomb of Sabu, a little east of Mariette's old house. Neither an architectural façade nor any chapels accessible to the living have been found, only a narrow corridor which penetrates the masonry from north to south with a deviation of 5° eastwards. The walls had been prepared and smoothed to receive the usual decoration, but when the mason had finished his work the sculptor, doubtless, had no time to commence his; nowhere are to be seen any of those sketches with point or brush which are usually met with in unfinished tombs of all periods. Two large stelae, or, if one will, two door-shaped niches, had been fashioned in the right-hand wall, and in front of each of these stood a statue in the very spot where the Egyptian workmen had set it up on the day of the funeral. The first represents a man seated on a solid stool, with the kilt round his loins and on his head a wig with rows of little tresses ranged in tiers. The bust and legs are naked; the forearms and hands rest on his knees, the right hand being closed with projecting thumb, the left being flat, with the finger-tips extending beyond the hem of the kilt. The new scribe was squatting before the second stela..... Neither of the two statues bears a single word of inscription, which would inform us of the name and titles of our man. The latter could not have been a nobody; a tomb of large size always necessitated considerable wealth, or a high position in the administrative hierarchy supplementing a moderate fortune. It also happened that Pharaoh, desiring to recompense someone in his *entourage* for services rendered, granted him a statue, a stela, even a whole tomb which the royal architects built at the expense of the Treasury. It is thus certain that our nameless Scribe was of good rank in his lifetime....."

There is, it seems to me, a complete parallelism between the two discoveries; and I believe that the argumentation will appear sufficiently cogent for the reader to admit that in both cases we have to deal with the representation, under two different aspects, of persons of high rank. The Cairo statues found by de Morgan (Pl. XXXI, Figs 3 and 4), are unfortunately nameless; as to those at the Louvre, found by Mariette, it happens that one of them gives us a title, a name and a filiation. We can henceforward call the Scribe of the Louvre "The Administrator Kai, son of the Royal Relative, Mesehet." Let us hope that this will explode the legend of the "little employee ready to resume his master's dictation".

¹ *Le Nouveau Scribe du Musée de Gizeh*, in the *Gazette des Beaux Arts*, 35^e année, 3^e période, ix, 265-70, and in the *Monuments et Mémoires Piot*, I, 1-6. Reprinted with slight modifications in *Essais sur l'Art égyptien*, 59-68. See also BORCHARDT, *Statuen und Statuetten* (Cairo Catalogue), pp. 33-5; the numbers 35 and 36, with the small photograph, show the exact place occupied by the two statues.

² May I be allowed to express the hope of seeing the direction of the Egyptian section of the Louvre decide on the complete publication of the *dossier* regarding the discovery of the Scribe. The archives of the Louvre perhaps contain documents destined to confirm or disprove the opinions expressed in this article.

SOME NOTES ON THE BATTLE OF KADESH

BEING A MILITARY COMMENTARY ON PROFESSOR J. H. BREASTED'S BOOK,
THE BATTLE OF KADESH (UNIVERSITY OF CHICAGO PRESS, 1903).

BY MAJOR A. H. BURNE, R.A.

THE Battle of Kadesh is of peculiar interest to students of military history, inasmuch as it is the first battle in history of which we have the details recorded with any approach to accuracy and precision. The work by Professor Breasted on the subject is thus of the greatest possible interest. If I venture, therefore, to offer a few comments on the book it is not to disparage it, but rather to bring it to the notice of military students, encouraged thereto by Prof. T. Eric Peet, who has himself helped me with one or two suggestions.

Naturally a layman cannot call in question Professor Breasted's facts, but one is not under the same obligation to accept all the inferences he draws from those facts, and there are one or two of these inferences which to a soldier would appear at least open to doubt, if not to criticism. Taking them in chronological order, my first point, which is of no great moment, concerns the position of the Hittite army when Ramesses reached the ford eight miles south of Kadesh. I understand that the word translated "behind" in the passage "drawn up behind Kadesh" may equally well mean "around." If this were the meaning in this passage, it would read "round about Kadesh." But whichever meaning is the right one here, I think the Hittite army was then not north-west of Kadesh, but north-east or east of it. It is true the Poem states that he was north-west, but what means would the recorder of the Poem have of ascertaining the exact position of the hostile army before they came into contact? We are not told that they captured any prisoners at this point, and if they did it is clear that the prisoners lied to them. Now the Record constantly uses the words "behind Kadesh" later on in the day to indicate "east of Kadesh." The reliefs all view the battlefield from Pharaoh's camp, whence "behind Kadesh" meant "to the east of Kadesh" which, I submit, is the correct meaning to be attached to the passage under discussion. What would be the most likely place for the Hittite king to post his army? The two Beduins who met him south of the ford must have directed him (in accordance with instructions) over the ford and by the westerly route, leaving Kadesh on his right hand. If they had not done so the Hittite king would have been in doubt as to which side of the Orontes the Egyptians would approach Kadesh by, and he would have had to send out patrols to establish contact and report the route taken. But there was no sign of any hostile patrols until Ramesses came level with Kadesh. If the Beduins had these instructions it must obviously have been the Hittites' intention to lie on the eastern side of the town hidden partly by the houses, but more by the prominent hill which rises in the centre of the town.

If we are to believe the Poem in its statement that the Hittite army was north-west of Kadesh that morning it is inconceivable that Ramesses could have encamped on the same spot a few hours later, as Professor Breasted makes him do, without some traces of the enemy's camp being left. To move an army of 20,000 men across a broad river by a ford

would be a considerable military operation, and at 2.30 p.m. there would probably still be some laggards and camp-followers moving across. No, I think we can give the Hittite king credit for doing the right thing, and doing it in the right way. His plans appear to have been well conceived and well carried out, up to a point.

Next, let us consider Ramesses' march on this great day. We are asked to believe that when he heard that the Hittites had refused fight and were posted round Aleppo, Pharaoh was so elated by the news that he pushed on in desperate haste, casting military precautions to the winds. What was the situation? The Egyptians had been marching continuously for thirty days, covering on an average thirteen miles a day. This was no mean achievement and amounted almost to a forced march for the infantry. Aleppo is still a hundred miles distant. The troops are getting footsore and weary, whereas the enemy is supposed to be stationary, and hence presumably fresh. What object will Pharaoh achieve by pushing on at still greater speed, while there are still a dozen marches in front of him, and with no prospect of effecting a surprise at the end of it?

But it may be asked, in that case how do you account for the undoubted fact that Pharaoh's host was strung out over many miles of country? I think it can be explained in the following way. The strength of his army is taken to be about 20,000 men, in four divisions of 5000 each. Half this force consisted of chariotry. Now each chariot contained only two men, and allowing it a road space in column of route of ten yards, 5000 chariots would occupy a space of 50,000 yards (over 28 miles) if all were together and closed up. On an open plain they could of course advance in line, but at defiles they might have to go in single file, and *there were two defiles* in this day's march, namely (1) the river Orontes, (2) the forest of Bani. As a matter of fact 5000 is probably an over-estimate of the number of chariots; but assuming that the chariots could cross the river and traverse the forest two abreast they would still extend over a matter of seven or eight miles. If the infantry marched ten abreast they would require about two miles. Then there are also flocks and herds to be considered. It is clear from the reliefs that each division took with it sheep, oxen and goats.

On the whole, if we say that the entire army would require ten miles of road space when all the divisions were closed up, we shall probably not be far wrong. Travelling at $2\frac{1}{2}$ miles per hour it would take the column four hours to pass a given point. But we know that the divisions were not closed up. A gap of about $1\frac{1}{2}$ miles existed between Amūn and Rē, and this can be easily accounted for by the ford. At the previous night's camp there was no water. It is almost certain that there would be a halt to water and feed on reaching the ford.

The rear divisions as they came up would probably have to wait until the divisions in front had finished their meal and moved on. Not knowing that another defile, in the shape of the forest, was in front of them the commander of division Rē might wait until his whole force was closed up before moving on. Thus the gap of $1\frac{1}{2}$ miles between him and Amūn would arise. And it is natural to suppose that the same would occur in the case of Ptaḥ and Sētekh. The total length of the column from the head of Amūn to the *head* of Sētekh would thus approximate to ten miles, without Pharaoh unduly forcing the pace in front. Now the distance from the ford to the evening's camp is about eight miles, so we should expect to find that as Ramesses was entering camp the head of division Sētekh would be still two miles short of the ford, and division Ptaḥ would be in the act of crossing the ford. This in fact is apparently the actual situation, and is substantially borne out by the Poem.

If Pharaoh had any inkling of the proximity of the enemy this would be a faulty formation to adopt, but assuming that his information was reliable there does not seem much to criticise. His army is doing a long and trying march and has yet another 100 miles to do before it expects to give battle. Ramesses endeavours to lighten the journey by keeping his columns strung out. Everyone knows how it adds to the comfort and marching powers of troops to give them "elbow room" on the march. On reaching a favourable camping ground which happens to be close to a walled city (Kadesh) Pharaoh omits no precautions but erects a zariba round his camp and sends out patrols towards the city. Up to date he can congratulate himself that he has done pretty well. He has made a satisfactory march and is looking forward to his tea. But what a surprise is in store for him!

From now onwards I think it would be a mistake to follow too closely the various accounts of the battle which ensued. Historical accuracy is more than we can expect. The battle was evidently a confused *mêlée*, a sort of Inkerman, and it is not to be expected that the subsequent historian would have sufficient data to put facts in their correct chronological order. A battle destroys all sense of time, indeed important events in the Battle of Waterloo are still in dispute and times for a given stage in the fight vary by as much as 1½ hours! So that I think all we can say for certain is that the Hittite charioteers struck Re^c in the right flank, dispersed it and overran the Egyptian camp, and began to plunder it. Now comes a very important event—"the arrival of the recruits" (lit. "youths"). The court historian naturally makes out that Ramesses by his personal valour turned the scale and drove the enemy into the river. I take leave to doubt this. I attribute the turn in the tide to the arrival of the "recruits." If they played the decisive part in the battle that I believe they did, it is as well to try and discover who they were and how they came to arrive "at the right place at the right time."

First of all, then, who were these "recruits"? I see no reason whatever to suppose that they are the division Amūn returning to the fight. They are marching in perfect order and serried ranks in the reliefs, and are obviously fresh troops.

They could hardly be a draft of real recruits just arrived from Egypt, because it was the opening of the campaign, and even if they had been sent after the army so soon they could hardly have caught them up. They would have been incorporated in the ranks of the older soldiers before the army ever set out from Egypt. Can they have been a friendly tribe from Amor, arriving in the nick of time from the west? Evidently that was the direction they did arrive from. But their dress and appearance in the reliefs does not differentiate them from the Egyptians. Also they would have joined Ramesses south of Ribleh instead of coming in from the west. The road through Hurmel (Map III) looks too mountainous for the chariots which they are shown as possessing. If they had come from the sea by the Nahr el-Kebir (Map I) they could have had no sort of previous communication with Ramesses, and to have struck in at precisely the right time and place of the whole campaign would be such a strange coincidence that the Egyptians would have had a little more to say on the matter. Also the Record says distinctly that they were Pharaoh's troops, which they look like on the reliefs.

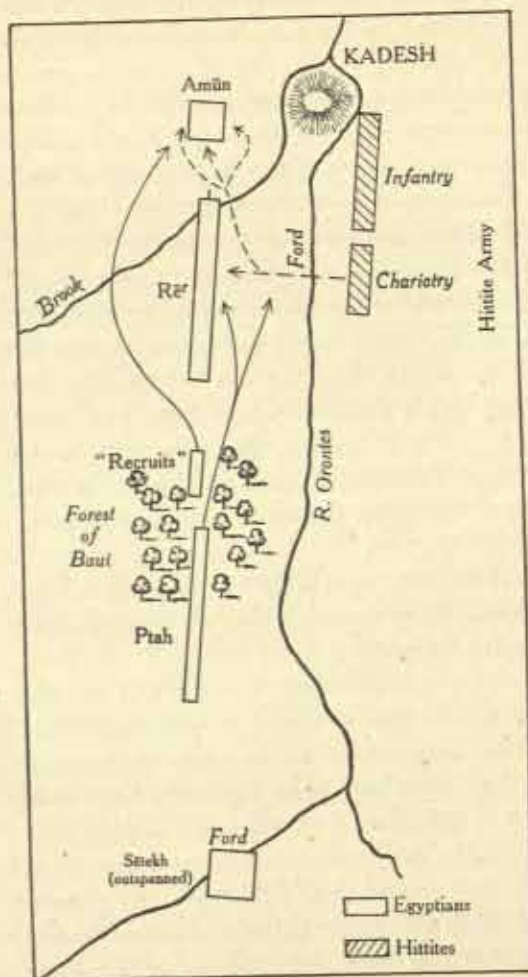
What, then, was this force? I suggest that they were part of the garrison which Pharaoh had left behind at his sea-base the previous year; that he had picked them up on his advance and attached them to one of his divisions. The Record mentions that he put the divisions into their order of march on the shore of Amor (his base), and what more natural

than that he should pick up every available man there? These troops would in a sense be "young men," i.e. "fresh" troops. They would be placed in the centre of the army and attached to either the rear of Rē or the van of Ptah.

Let us try to reconstruct the scene. And to do so we must go back a little. Passage No. 18 over one of the Reliefs has a sentence which Professor Breasted translates, "Now the division of Rē and the division of Ptah were (still) on the march; they had not (yet) arrived, and their officers were in the forest of Baui." From this the Professor infers that their officers had somehow got separated from their troops. This is unconvincing; it is,

moreover, now known that the word here rendered "officer" means no more than "soldier." We may therefore translate (with a slight grammatical deviation due to Erman), "their men had not yet come out of the wood of Baui." In other words these two divisions had not yet debouched from the forest. This fits in with probabilities, and I think we may take it that when the vizier (or his messenger) went back the "recruits" would be about in the position shown in the accompanying rough sketch.

As they debouched from the forest they would see the plain to their right front alive with hostile chariotry: the rear of division Rē would come running back into them with wild stories. Their obvious course would be to bear away to the left, being too few in numbers to attack in front. About that time the vizier would pass them, on his way to bring up Ptah. He would say to them "skirt round to the left, avoiding the battle in your immediate front and see if you can help Pharaoh, who is in dire straits. Meanwhile I am going back to bring up Ptah. While you attack in flank I will attack frontally with Ptah." We know that this is what he did actually do, and the above seems to me the natural and probable course of events.



There remains one more interesting study before us—that of the Hittite king. It is indeed unfortunate that we have not his account of the battle. He would have had some caustic remarks to make if he could have seen Ramesses' version. Up to a point his work was brilliant. Then, suddenly and unaccountably he seems to become paralysed. He commits a portion of his chariotry to the attack. Then he pauses apparently irresolutely. Then he sends the remainder of his cavalry. Then he hesitates again, and dares not commit his infantry. Why? Possibly the ford was over deep for infantry and he could not induce them to cross. But I think the most likely reason is lack of that higher gift in a leader—nerve and resolution at the critical moment. Lacking

this I think he just falls short of being a really great commander. A squadron of cavalry are enlarged upon the enemy. They disappear in a cloud of dust. The situation becomes "obscure," the commander waits for it to clarify. Alas, fatal delay! the enemy recovers his equilibrium, puts a bold face on it, refuses to believe he is beaten, and—wins! Many instances of this could be cited from the late war.

The post-war edition of *Field Service Regulations* formulates the eight "principles of war." It is an interesting task to apply them to the campaign of Kadesh, with the object of seeing how they stand the test. That task is outside the scope of this paper. Suffice it to say that the Hittite king observed the first seven of those principles and was consequently in a winning position, but threw away his chances of success by violating the eighth, while Pharaoh by regarding the eighth principle pulled off the victory.



1



2



3



4



1a



2a



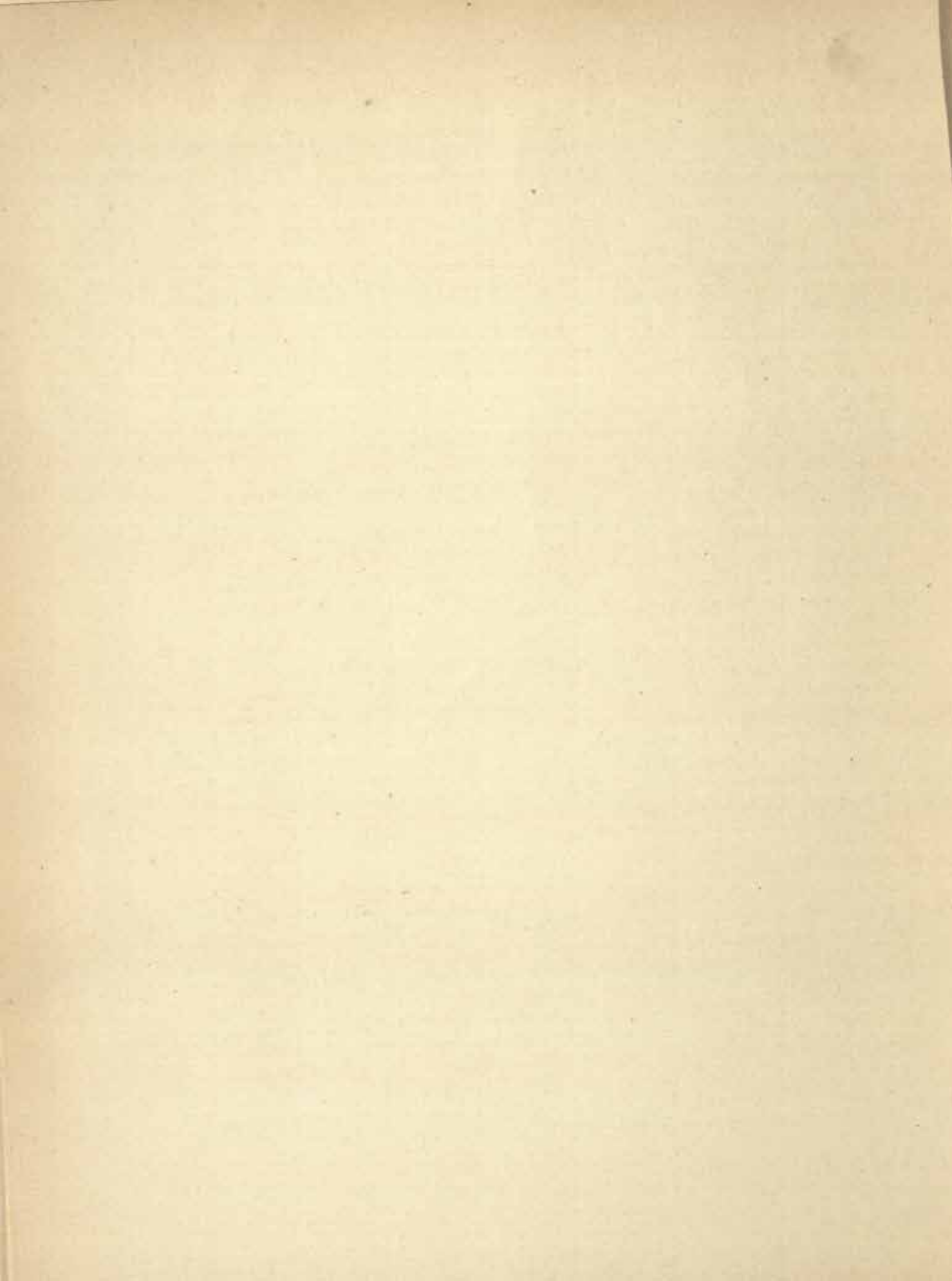
3a



5

THE CYLINDER SEAL OF PIKIN-ILI

In the collection of the Earl of Carnarvon



conjecture. The nominative of *Pikin* may be either *pik(i)nu* or *piq(i)nu*, with, possibly, the meaning of "offering." A name from the same root is *Paknanu*^m, "the offerer (?)." The root is likewise found in *bél pikitti* (plural *piknēti*), "lord of offerings," or the like, in numerous contracts recently found at Erech¹. *Pikin-ili* may therefore mean "God's offering."

The style of the inscription is that of about 2000 B.C., or earlier, and might well be used to fix the date of the cylinder to the reign of Amenemmes I.

On the left of the name *Pikin-ili* is a curved line about 5.5 mm. long. The two ends of this bend to the left, the upper with a sharper turn than the lower one. It might be the right-hand outline of an Egyptian hieroglyph.

Not without its importance is the nature of the stone—lapis-lazuli—of which the cylinder-fragment is made. This material is regarded as having been imported into Egypt, probably overland, from Persia. Owing to its beautiful colour, reminding the beholder of the pure blue of the sky, it was regarded as a sacred stone in Babylonia. According to the list of foreign countries and their products, published in the *Cuneiform Inscriptions of Western Asia*, II, Pl. 51, line 13 *cd*, the Land of the Divine Bull, which was called *Dapara*, was regarded as the land of the lapis-stone—𐎶 𐎶, *zagin* in Sumerian, and *uknū* in Akkadian (Semitic Babylonian)—though it is not impossible that this is a loan-word from the more primitive tongue.

There is undoubtedly much to clear up in this descriptive line. The Land of the Divine Bull might be regarded as the sky, but the other 47 countries explained in this inscription are in most cases recognizable as belonging to the earth, and as being, in fact, countries around Babylonia—Amanus, Lebanon, Nišir in Media (where the Ark rested), Palestine, etc., and southern Babylonia itself. Knowing as we do the close relationship existing in ancient times between parts of Persia and Babylonia, it is by no means unlikely that *Dapara* was a district or province of the former, or of Media. If this be the *Biknu* of later times, then *Esarhaddon* gives the place where lapis-lazuli was found more precisely and with welcome details, for he states that when he went against *Šitir-parna* and *E-parna*, "powerful city-chiefs," inhabiting *Patuš-arra*, a district of Media "beside the house of salt"—probably a salt-mine—this district was on the boundary of *Biknu*, "the mountain of lapis." As there are many quarries of rock-salt in Persia, it is difficult to locate the mine referred to by *Esarhaddon*, but those who have studied the mineral riches of the country on the spot could probably indicate the most likely locality for its salt and lapis mines. The lapis of the Babylonian cylinder-seals is in many cases similar to that of the Egyptian specimen now described, but the appearance of the surface sometimes gives the impression that the stone was somewhat softer. Different in appearance, and also, probably, in nature, was the Babylonian *uknū ēbbu*, "white lapis," which was much admired by the Babylonians. This was mottled blue and white, suggesting not only the azure sky, but also the white cloud-masses which moved across it. The beard of the moon-god *Sin* is described as being of *uknū*-stone, and it was of this material that the sacred flute of the sun-god *Tammuz-Adonis* was made.

Notwithstanding the identification on the stone itself of the *uknū ēbbu*, it is possible that the characters *na za-gin*, which are used to indicate the *uknū*-stone, stood for other stones of a similar surface-texture but of a different colour. Absolute precision of gem-

¹ If the nom. of *pikin* be *piknu*, this word might, by chance, be connected with *Biknu*, the country of the lapis-stone, mentioned below, but this seems unlikely.

Egypt at a very early date, and the occurrence of it in Egypt in pre-dynastic times suggests that the great trade routes of the later epoch were already open to traffic in the fourth millennium B.C. The Egyptian name for it was *ḥsbd*¹, and in Middle Kingdom inscriptions it is stated to have come from Tefreret². This place is mentioned again in several later texts³, but where it was situated is not known. The chief source of lapis-lazuli in ancient times is believed to have been the mines of Badakshan in the north-east corner of Afghanistan. In the Eighteenth Dynasty, lapis-lazuli is sometimes described as Asiatic (GARDINER-PEET, *Inscriptions of Sinai*, Pl. LXI, No. 200). In the Annals of Tuthmosis III it is said to have been imported from Zahi (the coast of Phoenicia), from Retenu (Syria) from Isy (Cyprus), from Naharin (Mesopotamia), and from Assur (Assyria). Two large blocks of it are stated to have come from Babylon (*Bbr*), and from Shinar came artificial as well as real lapis-lazuli. All these places, however, are obviously not the countries of the stone's origin, but merely countries of transit.

P. E. N.

¹ The earliest occurrence of the word seems to be on a fragment of the Annals of Snefru (*Musée Égyptien*, III, Pl. XXXI).

² CHASSINAT-PALANQUE, *Fouilles dans la Nécropole d'Assiout*, 108, 212. Cf. *Journal*, IV, 37.

³ DUMICHEN, *Hist. Inscr.*, I, 32; PIEHL, *Inscrip. Hiérog.*, I, 145 A; see also LEPSIUS, *Metalle*, 73, 74 and BRUGSCH, *Geogr.* III, 61, 63.

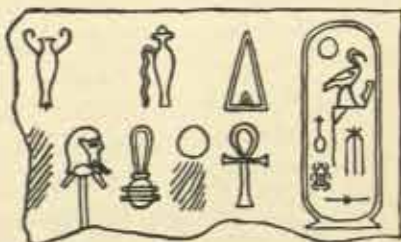
THE EGYPTIAN TEMPLE AT BYBLOS

By C. LEONARD WOOLLEY, M.A.

EGYPTOLOGISTS will be interested to learn that a French mission is about to undertake excavations at Jebél, the ancient Byblos, and that there is every probability of their bringing to light the Egyptian temple which is known to have existed in this Syrian coast-town. Its site has until recently been unknown; many years ago Renan procured from Jebél a well-known stela, now in the Louvre Museum, but could not ascertain the exact whereabouts of the building to which it had belonged. Further discoveries have, however, left little doubt upon this point.


During the war a small house was built on fairly open high ground south of the mediaeval castle, and in its wall is embedded a fine limestone slab about five feet long, adorned with reliefs of New Kingdom style. The reliefs are in two scenes, in each of which a seated deity is approached by a bearer of offerings; there are faint traces of hieroglyphs in the upper field. I learnt from the natives that while the foundations of the house were being dug, the workmen lighted upon the corner of a building constructed of very large stones, all carved in relief; the smallest of these was removed and built into the new house-wall, and the rest, apparently five in number, were left *in situ*, being too heavy to lift, and actually serve as foundation for the modern construction. There can be little doubt that this is the temple. The Museum of the American University at Beirut has long possessed an Osiride statue in local diorite, which came from Jebél; unfortunately it is so battered that it cannot be dated. This year Dr Virolleaud, Director of the Archaeological Department of the Syrian Government, secured a fragmentary relief shewing a royal figure in the attitude of adoration, and bearing an inscription which speaks of the "Ba'alit" of Byblos. The style is that of the Nineteenth Dynasty; the stone certainly comes from Jebél, though it had passed thence into private hands elsewhere.

In April last I saw, in the possession of a resident of Jebél, a stone which had been only just unearthed; this, too, comes from a large relief (part of a sceptre is visible), and it bears the cartouche of Tuthmosis III. It was found, not on the southern temple emplacement, but north-east of the town, where some large granite columns *in situ* mark the site of a temple apparently of later date. It might belong here, but, being merely a fragment, might equally well have been brought hither from anywhere else.



Part of a Relief, at Jébel.

[NOTE. The illustration, copied from a rough sketch sent by Mr Woolley, evidently depicts part of a representation in which the king is followed by his personified *ka*, of which latter the staff surmounted by a (royal) human head is characteristic. Unfortunately the presence of the *ku* gives no indication of the nature of the scene except that it was almost

certainly a "religious" one. Behind the cartouche, bearing the name Tuthmosis, with the addition *nfr hprw Rc*, "the fair one in mode-of-being is Rc" (a variant of the frequent *nfr hprw*, "fair in mode-of-being"), stands the usual epithet "given life like Rc." The two signs at the top to the left (the copy is perhaps not quite accurate in detail here) may be remains of the title  *hnti dbt*, "presiding over the (royal) robing-room (?)," one of the constant titles of the personified *ka*¹; see on this title KEES, "*Pr-dwt*" and "*dbt*," in *Rec. de Trav.*, 36, 1 foll.—Battiscombe Gunn.]

¹ The Eighteenth Dynasty form of this sign approaches somewhat more nearly to that in Mr Woolley's copy than does the printed form.

² Kees, "palace(-door)," but the association of this word with *pr-dwt*, "toilet-chamber," and also the old verb *dbt*, "to clothe," should be taken into full account.

BIBLIOGRAPHY 1920-1921: ANCIENT EGYPT

BY F. L. GRIFFITH, M.A.

AFTER contemplating the scientific harvest of the past twelve months (with some gleanings from previous years) one must recognise that the spirit of Egyptology remains strong, though material circumstances press hard on scientific research and record.

At home, our Society has received an accession of power and responsibility in the shape of a library, given by Sir Herbert THOMPSON; studious members will not forget the opportunities thus placed at their disposal, *Journal* VII 108. In Italy, a Committee for promoting Italian Studies in Papyrology and Egyptology, centred in Milan, has set itself a large programme to include the review called *Aegyptus*, a series of scientific studies appended thereto, and a popular series of manuals and edited texts in the various languages of Egypt, as well as the organisation of lectures and subsidising of excavations. In America, Professor BREASTED has obtained an increased budget for the Oriental Institute of the University of Chicago and is preparing new enterprises; meanwhile he has printed a report of his visit to Europe, Egypt and Mesopotamia to study excavated sites, make reconnaissances and purchase antiquities; of his purchases he figures a wonderful series of twenty-six limestone statuettes representing the owner of a tomb with his servants etc., belonging to the end of the Old Kingdom. *The University of Chicago Expedition to the Near East 1919-1920* in *The University Record* VII 6.

The energetic keeper of the Museum at Alexandria in the annual *Rapport sur la Marche du Service du Musée pendant l'exercice 1918-1919* publishes the scheme for more ample and suitable buildings, the present Museum being greatly overcrowded, and emphasises the need of larger funds for excavation, etc.

A little volume in the *Alte Orient* by the director of the Egyptian Museum at Berlin is devoted to a review of the history of the Museum, the plan for the new building and a consideration of the purpose of the collection for study and for popular instruction. SCHÄFER, *Sinn und Aufgaben des Berliner Ägyptischen Museums*. The authorities have also issued a guide (without illustrations) to their great and varied collection of papyri, with brief sketches of the history, religion, etc., *Das alte Ägypten und seine Papyrus*.

Mondini reviews BUDGE *By Nile and Tigris* in *Aegyptus* I 391.

In or about 1912 a canard was started in American newspapers to the effect that Dr Reisner had descended from the head of the Great Sphinx into the interior and discovered a "golden city" (with variants) worthy of the Arabian Nights. The report was copied by the English papers and created considerable sensation at the time and much annoyance to the unfortunate victim. It is amusing now to find an echo of it appearing in a German scientific periodical amongst the news after the war in 1920, *Orientalistische Literaturzeitung* XXIII 230.

Mr Seymour WALKER, who has given some excellent photographs of the Siwa Oasis in *An Outline of modern exploration in the Oasis of Siwa* (*Geographical Journal* LVII 29), has produced the first attempt at a grammar, on somewhat unprofessional lines, of the Berber dialect of this strange people, *The Siwi Language* (short grammar, brief account of customs, description of the Oasis). Reviewed by Sir H. H. JOHNSTON *Geographical Journal* LVII 465.

G. W. MURRAY argues from structure and vocabulary that Nubian, Bari and Masai form a Niloto-Hamitic group having a common ancestry, and that the "Niloto-Sudanic" group represented by Shilluk was probably also allied to them, *The Nilotic Languages* (*Journal R. Anthropol. Soc.* I 327), cf. THOMAS' criticism in *Man* XXI no. 69. MURRAY has compared Nubian with Bari in *Sudan Notes and Records* III 260.

H. A. MACMICHAEL tabulates vocabularies of eight tribes in Dārūr, including the Birged who, living in central Dārūr, speak a dialect of Nubian, *Darfur Linguistics* (*Sudan Notes and Records* III 197); the Nubian dialect of Jebel Midōb in the extreme N.E. had been already noted by him in *Journal R. Anthropol. Inst.* XLII 335.

Hess prints a long list of words from a native of "Jebel Kundugr" and a short list from Jebel Kargo (taken from Lepsius' papers) additional to the few words published in LEPSIUS' *Nubische Grammatik*. *Beiträge zur Kenntnis der Kordofan-Nubischen Sprache* (*Zeitschr. f. Eingeborenen Sprachen* x 63). MEINHOF's *Eine Studienfahrt nach Kordofan* is reviewed by S. H., *Sudan Notes and Records* III 286.

EXCAVATIONS AND EXPLORATIONS.

Dr BRECCIA has contributed to *Aegyptus* (1 350-359) a very complete account of the explorations in Egypt and the Sudan, extending from Meroë to the coast, by various agencies during the season 1919-1920.

MEROË. Dr Reisner's Harvard-Boston excavations in the pyramid field have shown that the private tombs on the southern hill date from the Ethiopian period, beginning as early as Pankhy. BRECCIA p. 351, cf. REISNER in *Sudan Notes* IV 74.

NAPATA. Dr Reisner concludes his description of the results reached in 1916 in excavating the temples of Barkal, terminating with a brief summary of the history of the site as disclosed by the further work of 1918-1919, its beginning being in Dyn. XVIII and its apogee reached in the early Ethiopian period, *The Barkal Temples in 1916* (*Journal* VI 247). During the two seasons 1919-1920, in finally clearing the Great Temple, he discovered six stelae, the most important being a granite monument with fifty lines of inscription dated in the 47th year of Tuthmosis III, in which the king impresses his might upon the people of Napata and gives us new details of some of the great events of his reign; the other stelae are of Sethos I, Pankhy, Pankhy-Khariut a son of Asperta, Sakhmakh queen of Nastosen, and a Meroitic stela of Tinyizmeni; a number of interesting statues and other sculptures are also enumerated including one of Hepzefa of Siut the governor of the south under Sesostri I, which had probably been removed from elsewhere by the Ethiopians to adorn their capital. REISNER *Historical Inscriptions from Gebel Barkal* (*Sudan Notes and Records* IV 59), cf. BRECCIA p. 350.

The same brilliant explorer gives an illustrated account of the excavations at El Kur'uw in 1917-1919—the discovery of the mastabas and pyramids of the kings of Dyn. XXV from Kashta to Shabaka, of Tanutaman and of one much later king, as well as tumuli of the ancestors of Kashta which contained flint arrowheads and "minutes," beads of gold, garnet and carnelian, and many valuable and interesting objects which are shown in the illustrations; also burials of horses; REISNER *The Royal Family of Ethiopia* (*Boston Museum of Fine Arts Bulletin* XIX 21).

FARAS. Quartz palaeolith, and Protodynastic cemetery, published as the first instalment of the account of three years' excavation (1910-1913). GRIFFITH *Oxford Excavations in Nubia* (*Liverpool Annals of Archaeology and Anthropology* VIII 1). The full records of all the finds are to be preserved in the Ashmolean Museum.

KUBANIEH. A memoir, only less richly illustrated than its predecessors, on a very interesting cemetery with characteristic C-group graves gradually merging into Egyptian Middle Kingdom. In a long and important argument Prof. Junker denies the presence of Egyptians south of the region of the Second Cataract before the New Empire, but admits that he was not able to obtain all the published accounts of Prof. Reisner's exploration at Kerma, which would perhaps have led him to a different conclusion. JUNKER *Bericht über die Grabungen auf den Friedhöfen von El-Kubanieh-Nord, Winter 1910-1911* (*Denkschriften of the Vienna Academy* 64 Bd. 1920). For the craniology see below p. 212.

EL-KÂB. A very interesting paper by Mr Somers CLARKE pointing out that the early town was circular enclosed by double walls of crude brick, and that a later rearrangement, after the river had encroached from the west, shows temple enclosures and a rectangular city wall of brick. This wall included the eastern half of the old town and a great space beyond it which appears never to have been occupied by building. The construction of the wall and of its gates, ramps and staircases to the top are described, and in addition a river groyne of stone probably of the same age as the reconstruction of the town. *El Kâb and the Great Wall* in *Journal* VII 54.

GEBELËN. Prof. SCHIAPARELLI, who excavated here before the war, is continuing his researches in a necropolis of the time of the first three dynasties, BRECCIA p. 354.

THEBES, West Bank. At Kurnet Mar'ai the French Institute has disinterred two tombs, one with chapel showing the cartouche of king Ay of Dyn. XVIII. BRECCIA p. 353.

M. DARESSY translates from the Spanish a contemporary account of the important discovery, made in 1886, of the intact tomb of Sennezem (no. 1 of Gardiner's *Catalogue*) at Deir el-Medīnah. Toda, *La découverte et l'inventaire du Tombeau de Sen-nezem* (*Ann. du Service* XX 145). The upper range of tombs at Deir el-Medīnah has now been almost entirely cleared by the French Institute, and two decorated ones have been found, BRECCIA p. 354.

In the Asâstf, the valley leading to Deir el-Bahri, the excavations of the Metropolitan Museum in 1918-1919 revealed a deposit of forty coffins of the Middle Kingdom, which had apparently been formed by the workmen of Hatshepsut; the tomb of Pbes (Dyn. XXVI) has been cleared, in good preservation,

revealing its plan and fine sculpture. LANSING in *The Egyptian Expedition 1916-1919* (Part II of *Bulletin of Metr. Mus.* July 1920).

DENDERAH. The Service des Antiquités under Baraize has laid bare (1) a small Birth Temple (partly destroyed in the later reconstruction of the site) in which Nectanebo II is represented as the child of Hathor and Ammon, and (2) the sacred lake or tank of the temple, lined with stone. LACAU *Les travaux du Service des Antiquités de l'Égypte en 1919-1920* (*Comptes Rendus de l'Acad.* 1920, 359), cf. BRECCIA p. 357. The temple is now protected by iron grilles and wire net, and a cast of the zodiac completes the roof of the pronaos whence the original was taken to Paris in 1823. BARAIZE *Rapport sur la mise en place d'un montage du zodiaque de Dendérah* (*Ann. du Service* xx 1).

BALÂNISH (on east bank, nearly opposite Abydos), instructive memoir on an important "Pan-grave" cemetery of Nubians settled in Egypt before the New Kingdom, and a cemetery of Dyn. XVIII. WAINWRIGHT, *Balabiah*, reviewed in *Ancient Egypt* 1921, 49.

TELL EL-AMARNÂ. The results of Professor Peet's exploration of 1921 including the site of a village free of the white ant pest have been indicated in *Notes and News, Journal* vii 107 and in the *Annual Report* of the Society, and PEET, *Excavations at Tell el-Amarna* (*Mon.* xxi, no. 84).

DERWAH (necropolis of Eshmunên). Discovery by Lefebvre of the tomb of the High Priest Petusiri, sculptured under Greek influence, and of his coffin inlaid with glass hieroglyphs, cf. below pp. 205, 214; also of a tomb of ibis mummies, but apparently not of the divine Ibis which should still be looked for and may yield historical data. LACAU *Les travaux du Service des Antiquités* (as above) p. 362; BRECCIA p. 355.

EL-BERSHEH. Important find of model boats, groups of workers, etc., with finely painted and inscribed coffins in the tomb of a nomarch which had been to a great extent preserved from plundering by a fall of rock. DUNHAM *The Tomb of Dehuti-Nekht and His Wife* (*Boston Museum of Fine Arts Bulletin* xix 43).

HERACLEOPOLIS MAGNA to LAHÛN. For the rich finds in the cemeteries see *Ancient Egypt* 1921, 23.

LISHT. Account of continued exploration (1916-1918) of the pyramid of Sesostri I, discoveries of graves with furniture, and of a sledge, carefully buried, which had been used for hauling furniture or statue to a tomb. LANSING in *The Egyptian Expedition 1916-1919*, 1 (Part II of *Bulletin of Metr. Mus.* July 1920).

ALEXANDRIA. Prof. BRECCIA has discovered two more painted tombs at Anfûshi (Pharos), probably of the beginning of the Roman period. *Aegyptus* i 358.

ISTHMUS OF SUEZ. CLÉDAT continues his valuable *Notes sur l'Isthme de Suez*, describing the ancient canal of Zaru, Roman roads and extensions of irrigation to Serbonis. He considers that the flourishing condition of the N.E. frontier began with the Roman works and ended with the Arab conquest. *Bull. Inst. Fr.* xvii 103.

PUBLICATION OF TEXTS.

(a) *From sites in Egypt, etc.*

PHILAE. A melancholy interest attaches to the publication by the late W. MAX MÜLLER of Philadelphia of *The Bilingual Decrees of Philae*, forming the third volume of his *Egyptological Researches*. The decrees were promulgated by Ptolemy V Epiphanes in renewal of the Memphite or Rosetta decree; the so-called "second" is of year 19, after the overthrow of the rebel power of Ankhnakhis in Upper Egypt, the "first" is of year 21, extending the honours to the queen. Almost from the beginning of his career the author had kept in view these valuable records, imperfectly published by Lepsius, but never had the opportunity of examining the originals until 1910 when his eyesight had lost its keenness. This publication shows a very great advance on Lepsius' text, both in the hieroglyphic and the demotic versions which are carefully reproduced in facsimile outline on a large scale (7/10 of original). But a masterly transcript and restoration in the *Urkunden* made by Sethe with the help of squeezes and fine photographs and published in 1916, shows a much more complete recovery of the injured portions of the texts; Sethe however gives no copy of the demotic, but only a transcription into European characters.

HIERACONPOLIS. Photographs of the best-preserved scenes in a rock-cut tomb of Dyn. VI. KEES *Studien zur Ägyptischen Provinzialkunst* Pl. I, II.

WÂDI MIYAH. Complete description of the temple of Sethos I in the desert east of Edfu (hitherto known as Redestyah or Wâdi Abbâd), with corrections of the published texts and twenty plates, from photographs and notes of COUTAT made in 1910. GAUTHIER *Le Temple de l'Oûâdi Miyah* (*El Knaïs*) in *Bull. Inst. Fr.* xvii 1.

EL HELLAH (opposite Esnah). Lintel of the tomb of the chief of stables of Ramesses III, found thirty-five years ago, identified, clearing away a number of errors. DARESSY *Bas-relief d'un écuyer de Ramsès III* (*Ann. du Service* xx 3).

THEBES, West Bank. Full publication of Tomb no. 60 at Shêkh 'Abd el-Kurnah (no. 60) a magnificent monument, the only well-preserved tomb of Dyn. XII in the Theban necropolis, with very instructive scenes. DAVIES and GARDINER *The Tomb of Antefoker, Vizier of Sesostris I*: reviewed with new interpretation of many texts by Battiscombe GUNN in *Journal* vi 298.

A very lengthy review of the same authors' *Tomb of Amenemhêt* by MORET in *Revue Égyptologique* N.S. i 267.

MÉDAMÛD. Late sarcophagus of limestone. DARESSY *Un Sarcophage de Médamoud* (*Ann. du Service* xx 175).

KAŠR ES-SAIYÂD. Photograph of scene in a tomb of Dyn. VI. KEES *op. cit.*, Beitaful 1.

ABYDOS. Slabs from a temple built or completed by Sethos I for his father, of fine design and workmanship, with ritual scenes, edited by WINLOCK *Bas-reliefs from the temple of Ramsès I at Abydos* (Metropolitan Museum *Papers* vol. i part 1), with valuable commentary. The symbol of Osiris at Abydos was not a reliquary of the head of Osiris but represented the entire god; this and the Busiris symbol (the *dad*) were the primitive fetishes of the towns.

L'inscription d'Ouni has been edited for the *Bibliothèque d'Étude* of the French Institute by TRESSON.

HEMAMIEH. Photographs of scenes in the remarkable rock-cut corridor-tombs of Dyn. IV—V, KEES *op. cit.*, Pls. III—VI.

DERWAH (necropolis of Eshmûnên, nearly opposite El-'Amarnâ). A wonderful funerary monument consisting of a small temple with naos and pronaos over a burial pit in which was interred Petusiri, high priest of Thoth. Petusiri evidently lived through the dreadful ten years of the second Persian rule, and according to his inscriptions did much to restore the country after Alexander's conquest. The magnificent monument which he erected for himself and his father is covered with hieroglyphic inscriptions and sculptures in a style which successfully combines Greek and Egyptian characters, dating from the early days of Ptolemaic rule. LEFEBVRE *Le tombeau de Petosiris* (*Ann. du Service* xx 41). Funerary and other texts including one of 137 lines, and proof that the coffin-lid in the museum of Turin with inlaid hieroglyphs is of the brother of Petusiri and probably from the same tomb, but thrown out in Roman times. *Id. Textes du tombeau de Petosiris* (*Ann. du Service* xx 207). (See pp. 204, 214.)

MEMPHIS (Mit-Rahîneh). Black granite statue of Ramesses II, apparently sculptured for Thebes; limestone block of the same; alabaster block naming prince Rameses-Usipeht, son of Ramesses II?; blocks of king Sheshonk (II) and prince Takellothis before a lion-goddess; quartzite jamb of Amasis II, the cartouche defaced. DARESSY *Fragments memphites* (*Ann. du Service* xx 167).

TELL EL-YAHÛDÎKH (Shôbak). Ramesside group of Pissai, governor of the southern countries and "fan-bearer," with his wife Twosri. DARESSY *Un groupe de statues de Tell el Yahoudieh* (*Ann. du Service* xx 161), pointing out an indication that the "fan-bearer" should rather be translated "standard-bearer."

BUBASTIS. Two stelae of late period in the Cairo Museum. DARESSY *Deux stèles de Bubastis* (*Ann. du Service* xx 122).

SAFT el-HENNEH. Group of man, wife and daughter, probably of the time of Amenophis III usurped in Dyn. XXII by a general and prophet of Sopd with the associate goddess Khensyt. DARESSY *Un groupe de Saft el Henneh* (*Ann. du Service* xx 123).

LOWER EGYPT. Five stelae of gifts of land to temples from Ramesses I to Psammetichus I, now in various collections. SPIEGELBERG *Neue Schenkungsstelen über Landstiftungen an Tempel* (*Zeitschr. f. äg. Spr.* lvi 55).

(b) *From Museums, etc.*

GRENOBLE. A second article completing the publication of the collection—stelae, coffins and ushabtis, with a photograph of the lower fragment of the famous stela of Kûbân. MORET *Monuments Égyptiens de la collection du Comte de Saint-Ferriol* (*Revue Égyptologique* N.S. i 259).

COPENHAGEN. Complete publication of the tomb-chapel of Ka-em-rent (Saqqarah D. 2) with interesting scenes of Dyn. V. MOGENSEN *Le Mastaba Égyptien de la Glyptothèque Ny-Carlsberg*.

STOCKHOLM. Autographed copies and descriptions of thirty-six Middle Kingdom and later stelae, etc., with indexes and one photographic plate. MOGENSEN *Stèles Égyptiennes au Musée Nationale de Stockholm*.

(c) *Hieratic and Demotic.*

A vast collection of 1059 graffiti, chiefly in hieratic but including figures of men and animals and other designs collected from the steep rocks of the Theban necropolis in the winter of 1895-1896, reproduced apparently full size and edited with ample indices. The graffiti are principally of officials and workmen of the necropolis in the New Kingdom; names of females are entirely absent, perhaps for superstitious reasons. SPIEGELBERG *Ägyptische und andere Graffiti aus der thebanischen Nekropolis*.

Professor PEET has published two important papyri in the Liverpool Free Public Museum in a volume entitled *The Mayer Papyri A and B*; of A a fine hand-facsimile is given covering thirteen large folio plates, of B a photograph, with transcriptions and translations. The former, closely connected with the Abbott papyrus, is dated in year 19 (of Ramesses IX) and contains notes of evidence, etc., taken in the trials of robbers of the necropolis and the royal tombs, and of others who robbed the royal treasury of Ramesses III. The second is a fragment only, of about the same period, of evidence in the trial of the thieves who plundered the tomb of Ramesses VI. Their editor is to be congratulated on accomplishing a much needed but difficult piece of work in a very thorough manner.

MÖLLER has added to his brilliant decipherments that of a legal document in Berlin of Dyn. XXII, a sacerdotal promissory note with interest at 100% for a year, the earliest known of its kind, and adds interesting remarks on Libyan and Numidian proper names. *Ein ägyptischer Schuldsein der zweiundzwanzigsten Dynastie* (Sitzungsb. Berlin Academy 1921, 298).

SETHE has combined with PARTSCH the jurist to edit a number of documents illustrating Egyptian legal practice in regard to sureties, a branch of Egyptian law hitherto scarcely recognized. The earliest dates from the reign of Darius, the rest belong to the Ptolemaic age. In the philological section of over 500 pages SETHE transcribes and translates about twenty documents or extracts of such with elaborate commentary and hand-facsimiles. Some of these are now published for the first time, others re-published, several in the Cairo collection with new fittings of fragments, and in every case an advance in interpretation. PARTSCH is responsible for the Juristic section of 250 pages, in which Sethe's material along with other documents is examined in detail from the point of view of the historian of legal institutions. In becoming surety it appears that an Egyptian laid his hand inside that of the creditor and at the same time pronounced the conditions of his suretyship. The surety might pledge his property or apparently his personal service. Scientifically arranged indexes complete a work of great importance. *Demotische Urkunden zum ägyptischen Bürgschaftsrechte vorzüglich der Ptolemäerzeit* (Abhandlungen d. Sächsischer Akad. Bd. XXXII).

Professor JUNKER appears for the first time as a demotist (an accomplished one as might be expected) in editing *Papyrus Lonsdorfer I* (Sitzungsb. of Vienna Academy 1921 no. 2). The text is a marriage "contract," better termed a marriage settlement, as Prof. Junker points out, dated in year 15 of Nectanebos I, 363 B.C. This helps to fill the serious gap in demotic documents which exists between the reign of Darius I and the conquest by Alexander.

Facsimile of an early Ptolemaic papyrus from Ghorân with a rare date in the epagomenal days for which several parallels exist in documents back to the Hyksos period; a specially interesting point is the mention in this date of the feast of lamps which seems to have continued throughout the five epagomenal days. SOTTAS *Comptes Rendus* of the Academy 1920, 223.

SOTTAS *Remarques sur le "Poème Satirique"* (*Revue Égyptologique* N.S. i 129) publishes a number of notes on this curious and difficult demotic text, describing a wandering harper, with a tentative translation, the first serious study of it for over 35 years; see also *addenda* ib. p. 267.

SPIEGELBERG *Ein Bruchstück des Bestattungsrituals der Apistiere* (*Zeitschr. f. äg. Spr.* LVI 1) transcribes and translates a text in mixed demotic and hieratic of Ptolemaic age upon a Vienna papyrus published by Bergmann, recognising in it the detailed ritual for burial of the Apis bull. Unfortunately beginning and end are both lost. It contains references to two earlier Apis burials in the reigns of Apries and Amasis.

In his *Koptische Etymologien* (below pp. 209-10) SPIEGELBERG publishes (without transcribing or translating) a photograph of a curious demotic text at Heidelberg having interesting metrological data.

HISTORY.

WINLOCK *On Queen Tetisheri, grandmother of Ahmose I* (*Ancient Egypt* 1921, 14) publishes a fragment in the Petrie collection proving that the queen lived on into the reign of Ahmose. Though of modest birth she became the matriarchal "ancestress of a line of women famous in Egyptian history—Ahhotp, Ahmose

Nefretari, Ahhotp II, Ahmose and finally Hatshepsut with whose ambitions the female line of the royal family reached its climax and suffered its eclipse."

Queen Hatshepsut is the heroine of a historical drama by Terence GRAY *The Life of the King of the South and North Kamari's Daughter of the Sun Hatshepsut, a Pageant of Court Life*. The author endeavours throughout to use the monumental evidence both in language and in archaeological setting. Reviewed by DAWSON *Journal* vii 111.

DARESSY *La princesse Amen-mérit* (*Ann. du Service* xx 143) shows that this lady, tutored by Benermert in a group from the *favissa* of Karnak, was daughter of Tuthmosis III, not of Ramesses II.

MÖLLER justifies the youthfulness attributed to Akhenaton by Elliot SMITH by the interesting analogy of the Moslem boy-heretic El-Hâkim, and discusses the meaning of the name Akhenaton. *Echnaton* (*Zeitschr. f. äg. Spr.* lvi, 100).

DARESSY *Le scarabée du cœur de la grande prêtresse Ast-m-kheb* (*Ann. du Service* xx 17) has discovered a record of this scarab in the plates of Zoëga's work on the obelisks; in Zoëga's time it was in the Borgian museum.

CAVAIGNAC *La milice Égyptienne au vi siècle et l'empire Achéménide* (*Revue Égyptologique* N.S. i 192) discusses the military and taxation system, the holding of a third of the cultivable land by the soldiery and its probable exemption from taxes under the Persians as well as in the Saite period, recommending the subject as one for Egyptologists to study.

CLOCHÉ *La Grèce et l'Égypte de 404 à 332/1 avant J.-C.*, (*Revue Égyptologique* N.S. i 210, ii 82) studies the chronology and history of the Egyptian dynasties that maintained themselves against the Persians, writing from the point of view not of an Egyptologist but of a student of the political relations of Greece with Persia and the Levant.

SPIEGELBERG *T. Sextius Africanus als Stifter eines Obeliken* (*Zeitschr. f. äg. Spr.* lvi 102) on a fragment of a Roman obelisk in the Borgian collection at Velletri (Veii), published by Zoëga, but neglected of late.

MÖLLER seems to have found the true explanation of Herodotus' displacement of the pyramid builders in his Egyptian history. Mykerinus (Hdt. ii 129) in name and history combines the features of two kings whom Herodotus confused together—Menkheres (Menkeure) of Dyn. IV, and Bochorinis (Bocchoris, Bekerrinf) of Dyn. XXIV, about 750 B.C. *Zu Herodot's ägyptischen Geschichten* (*Zeitschr. f. äg. Spr.* lvi 76).

PETRIE *The Transmission of History* (*Ancient Egypt* 1921, 44). A tabulation of the Ptolemaic reigns from the later annalists showing the corruptions introduced after only a few centuries, with reflections suggested thereby as to the credibility of Manetho's original work when untouched by compilers.

GEOGRAPHY.

The Egyptian nomenclature of the Oases bristles with difficulties. The word for "oasis," hitherto read *et*, is *whst*, Coptic *wake*, Arabic *wah*. Dwellers in the oases were known as Sekhtiu-gs, i.e. "Field-people of the side!" though this name was misinterpreted at an early date by the Egyptians themselves. The seven oases named at Edfu were (1)...=1, (2) [Kenemt]=Great Oasis, Dakhile, (3) "The Land of the Cow" (Ta-eh) = Farafra, (4) "Field of the yam-tree" = 'Ain el-Wâdi, (5) Desdes = Bahariye, (6) Sherp or "Field of Salt" = Wâdi Natrûn, (7) T...=Siwa. SETHE *Die Ägyptischen Bezeichnungen für die Oasen und ihre Bewohner* (*Zeitschr. f. äg. Spr.* lvi 44).

A second fascicule completing the first volume of MASPERO and WIET *Matériaux pour servir à la géographie de l'Égypte* derived from sources of the Byzantine and Muhammedan periods, has been published in the *Mémoires* of the French Institute in Cairo.

FOREIGN RELATIONS.

Professor BREASTED has published a number of lectures recently delivered in various centres in America: *The New Past* (*The University Record*, Chicago, vi 237) describes the opening of a new vista of Ancient History during the last century, beyond Greece and Rome which till then bounded the view, displaying the birth of ideas and material inventions back to geological times, and urges America to further efforts in reconstructing this history. *The Origins of Civilisation* (*The Scientific Monthly* Oct. 1919-Mar. 1920) follows the steps of invention and the development of the arts throughout the early ages of mankind in a series of admirably illustrated discourses on the Old Stone age, the Dawn of Civilization, the Earliest Civilization and its Transition to Europe, Egypt and Mesopotamia having in particular formed the nidus of development. *The Earliest Internationalism* in *The Semicentenary Celebration of the Founding of the University of California, 1868-1918*; Egypt produced the first world empire with a universality of

thought embodied especially in the person of Akhenaton whose "monotheism was but imperialism in religion." Egyptians, Hittites, Assyrians and Babylonians, by diplomacy and force of arms, ever strove for the possession of Palestine and Syria, the bridge between Asia and Africa.

Attention may also be drawn to PETRIE'S volume *Some Sources of Human History* largely dealing with "prehistoric" periods and furnished with references to sources.

A work which I have not seen, SPENGLER'S *Untergang des Abendlandes*, the title of which sounds pessimistic enough as far as Europe is concerned, contains many strange statements regarding the philosophy and ideas of ancient Egypt. SPIEGELBERG, in a special criticism of this side of the book, concludes that the author's Egyptological equipment is too slight for his task. *Ägyptologische Kritik an Spengler's Untergang des Abendlandes* (Logos IX 188).

HALL *Egypt and the external world in the time of Akhenaton* (Journal VII 39) on the relations of Egyptian to Babylonian, Hittite and Minoan civilisations and the earliest (evanescent) appearances of the Aryans; the origins and influence of the monotheism of Akhenaton.

JONDET, who discovered and charted the remains of the pre-Alexandrian harbours of Pharos, criticises the attribution of them by R. WEILL (*Les Ports antehelléniques de la côte d'Alexandrie*) to foreigners and particularly to Minoan Crete. He thinks it improbable that any foreign power would have been permitted by Egypt to establish itself on Pharos peacefully—as was suggested by Weill—with works on so vast a scale; but he finds analogies in other ports on the coasts of the Levant, including of course Tyre, where a small island off the shore seems to have formed the starting point of a harbour, and desires careful investigation of the question. *Bull. Soc. arch. d'Alexandrie* XVII 167.

MITRA in *Prehistoric Arts and Crafts of India* (University of Calcutta, Anthropological Papers, No. 1) suggests some early connexions with Egypt. Reviewed *Ancient Egypt* 1921, 59.

ALBRIGHT in support of his theory that Menes was contemporary with Narām-sin of Babylonia, quotes a New York alabaster vase with inscription of Narām-sin as fixing the position of Magan; LANGDON comments on the name and age of Manium in the Narām-sin record, and Prof. SATCE opposes Albright's views. *Menes and Naram-sin* (Journal VI 295). ALBRIGHT returns to the charge in *Magan, Meluha and the synchronism between Menes and Narām-sin* (Journal VII 80; for copper ore in Wādī 'Alāki in Lower Nubia see *op. cit.* 110).

AUTRAN in *Phéniciens, Essai de contribution à l'histoire antique de la Méditerranée*, develops a theory that "Aegean Phoenicians" were the teachers of civilisation to prehistoric Egypt: reviewed by GIUFFRIDA-RUGGERI, *Aegyptus* II 117.

WOOLLEY has found at Carchemish a sealing of Pharaoh-Necho who was vanquished there by Nebuchadnezzar in 604 B.C., *Or. Lit.-Zeit.* XXIV 43; in the Museum of the American University of Beirut he found a seal of Amenophis, and an Egyptian statue in basalt.

LEUKEN, who has studied under Littmann and Sethe, in his dissertation *Der Einfluss Ägyptens auf Palästina* utilises especially the evidence of excavation, distinguishing the three periods Presemitic, Amorite, and Israelite. In the Amorite period Egyptian influence was strongest, but at no time is it conspicuous.

KNIGHT'S *Nile and Jordan, being the Archaeological and Historical Inter-relations between Egypt and Canaan*, is a large compilation with bibliographical references and excellent indices.

PATON has published the third volume (in two Parts) of his *Egyptian Records of Travel in Western Asia*, containing the Annals of Tuthmosis III elaborately edited, and an index to the three volumes, all of which are reviewed together by WRESZINSKI *Or. Lit.-Zeit.* XXIII 269.

NELSON in a Chicago dissertation *The Battle of Megiddo*, printed at Beirut in 1913 but perforce issued only in 1921, discusses minutely the narrative of this great event in Tuthmosis III's first campaign and especially its geographical conditions from personal study of the ground. The illustrations consist of twelve photographic views and four maps. The author, who was a pupil of Prof. Breasted, now holds an appointment in the American University of Beirut.

In Philistia GARSTANG has found evidence of two early crude-brick walls at Gaza, probably built under Egyptian domination. *The Walls of Gaza* (*Pal. Expl. F., Qu. St.* 1920, 156); see also an interesting lecture by PHYTHIAN-ADAMS on the *History of Ascalon* (*op. cit.* 1921, 76).

Evidence for the identification of the Yam Sûph, OXFORD *The Red Sea (Yam Sûph)* *op. cit.* 1920, 176.

CAPART reviews the recent works of Gardiner, Sethe, Erman and others on the history of the Alphabet, especially in relation to the Sinai inscriptions. *Quelques découvertes récentes relatives à l'Histoire de l'Alphabet* (*Bulletins de la classe des Lettres* of the Belgian Academy 1920, 408). SOTTAS publishes a lengthy criticism

of GARDINER's results in *The Egyptian Origin of the Semitic Alphabet*, somewhat belated having been written without knowledge of other criticisms, but still interesting; SOTTAS considers that so far as the present evidence goes there is but little for which the inventors of the Sinai alphabet were indebted to Egypt. *Une Nouvelle Théorie sur l'Origine Égyptienne de l'Alphabet Sémitique* (*Journal Asiatique* XI Sér. t. XVII 123). EISLER's *Die Kenitischen Weihinschriften der Hyksoszeit* is reviewed by FARINA in *Aegyptus* i 373.

PETRIE *The Alphabet in the Twelfth Dynasty* (*Ancient Egypt* 1921, 1) publishes a Middle Kingdom seal with four characters from Lahun and an ostrakon of Dyn. XII newly fitted from fragments found at Kahun [the peculiar characters on which are the rare hieratic symbols of subdivisions of the Egyptian *hekat* or *huahel*].

Two Carian inscriptions from Egypt have been re-published: that of the château d'Uriage (from Zagâzig) and now at Grenoble by AUTRAN *Rev. Égyptologique* N.S. i 190, that of the Nicholson collection by ROWE *An Egypto-Karian bilingual stele in the Nicholson Museum of the University of Sydney* (*Journal R. Asiatic Soc.* Jan. 1920, 85).

CLERMONT-GANNEAU publishes and discusses a slab with Nabataean inscription found in 1914 on the surface at Tell esh-Shukaffiyeh, three kilometres from Tell el-Kebir in the Wâdi Tumilat: it is dated on 21 Pakhons of the fourth year of Ptolemy, corresponding to (lost date of an Arab king). The Ptolemy is probably the XIVth or XVth of the name. *Les Nabatéens en Égypte* (*Rev. de l'histoire des Religions* LXXX I).

PHILOLOGY.

SOTTAS *L'Égyptologie en tant que discipline philologique* (*Scientia*, Dec. 1920, 445) very ably characterises the stages of Egyptian from its earliest known form to Coptic, enumerates the aids to its understanding in old vocabularies, in translations into the languages of its neighbours and in transcripts into their writing. The degree of its relationship to Semitic or Hamitic languages is not high enough to make them a corner-stone in teaching it, and in fact Comparative Philology is of little service compared with a study of Egyptian itself in all its stages.

NAVILLE in his treatise *L'Évolution de la langue Égyptienne et les langues sémitiques* deals with writing as well as grammar. He takes the view that Semitic analogies are deceptive; that Egyptian being an African language, consisted of words of one syllable rather than of two or three: that the writing marks vowels: and remarks that changes in writing to demotic and to Coptic letters correspond to changes in language and the adoption of new dialects for literary purposes. M. NAVILLE's views are criticised by RICCI *M. Ed. Naville et la linguistique Égyptienne* in *Revue Archéologique* N.S. XIII 120.

MERCER has translated ROEDER's excellent *Short Egyptian Grammar*, the original of which was published in 1913; it is complete in itself with sign-list, reading exercises and glossary, and forms a useful introduction to Egyptian.

GARDINER writing *On certain Participial Formations in Egyptian* (*Revue Égyptologique* N.S. II 42) traces the origin of all the relative forms of the verb in the passive (not the active) participle; finds a passive form *n iryt-f* "before he was made" corresponding to the active *n irt-f* "before he made," and consequently traces both of these likewise to a passive participle rather than an infinitive. The form *adm-t-f* in its various uses however may have more than one origin.

ERMAN points out instances of omission in writing one of two similar consonants at the end of one word and the beginning of the next as proving that those words were closely joined in pronunciation. *Zusammenziehung zweier Worte in der Aussprache* (*Zeitschr. f. äg. Spr.* LVI 61).

The Berlin Wörterbuch is in MS. up to the end of *ⲁ*—*h*. Owing to the great increase in the cost of autograph printing, only excerpts are now made of new texts, unless they are of special importance. A hand-dictionary is being prepared. *ERMAN Wörterbuch der ägyptischen Sprache* (*Sitzungsab.* Berlin Academy, 1921, 133).

SOTTAS reviews *Annales du Service des Antiquités* XVII from the philological standpoint (*Revue Égyptologique* N.S. i 262). See also p. 212 for MONTER's work on Sinuhe.

FARINA proposes a good correction of the text of the "Redesiyeh" inscription of Sethos I, *Aegyptus* II 97; READ suggests an explanation of a very corrupt cartouche on a stela which commemorates a sacred bull of Hermonthis, *A cartouche of Augustus* (*Ancient Egypt* 1921, 46).

SPIEGELBERG, who is preparing an etymological dictionary of Coptic, makes valuable comparisons of
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many Coptic words with Egyptian and demotic in *Koptische Etymologien* (Sitzungsb. of Heidelberg Academy 1919, 27 Abhandlung); see also WIESMANN in *Zeitschr. f. äg. Spr.* LVI 99.

RANKE supplements his collection of Egyptian names in cuneiform: Dâdu in the Amarna letters = Eg. Twtw which however is not properly Egyptian but the Semitic name Da'ûd belonging to a man of the highest rank at the court. In the titles of Ramesses II at Boghazkeui "brother of Hâra or Anhara" refers to the god Onuris, not to Horus; Manahpiriya, Manahpiya, incidentally mentioned as grandfather of Amenophis IV is probably the popular form of the name of Men-hprw-re' Tuthmosis IV which might perhaps be written in Egyptian as *Mn-hpry. *Keilschriftliches* (Zeitschr. f. äg. Spr. LVI 69).

SPIEGELBERG shows that a suggestion of Humbert that the names Meri-ba'al etc. were compounded with the common Egyptian element *mry* "loving" or "beloved of" is entirely negated by cuneiform and Greek renderings of this component (Zeitschr. f. alttest. Wissenschaft xxxviii 172).

LANGLOIS seeks the origin of *Msr* in the Egyptian *t-mry*. *Essai pour remonter à l'original Égyptien du terme Sémitique désignant l'Égypte* (Revue Égyptologique N.S. i 148). ALBRECHT compares *shy* or *shaby*, translated "snake's-skin" by Maspero in his edition of the Instruction of Amenemmes I, with Semitic roots. *Ein ägypto-semitisches Wort für "Schlangenhaut"* (Or. Lit. Zeit. xxiv 58).

MÖLLER explains Hermotybies Hdt. ii 164 as literally "spearmen" not "horsemen": Manerôs Hdt. ii 79 as probably "the Cow-herd" *Manehow*, who appears in a late text as lamenting the death of Osiris on a reed flute. *Zu Herodots ägyptischen Geschichten* (Zeitschr. f. äg. Spr. LVI 76).

SPIEGELBERG identifies *ῥαῖδαρ*, *ῥαῖδαρ* the name of an Egyptian ointment in Aristophanes, etc. with *sgn* "ointment," *Hermes* LVI 332.

HERBIG criticises BARENTON *La langue Étrusque, dialecte de l'ancien Égyptien* as an unscientific production.

PALAEOGRAPHY.

BONNET has written a popular illustrated account of Egyptian writing. *Ägyptisches Schrifttum*, reviewed by WIESZINSKI (Or. Lit.-Zeit. xxiii 271).

MISS MURRAY discusses various forms of the herb-sign *hn*; shows that the symbol of Neith was not a shuttle but a pair of bows in a case; the 'aper is a tassel of beads attached to the ends of necklaces to hang down the back, and usually worn by men not women. *Origins of some signs* (Ancient Egypt 1921, 35).

MÖLLER interprets the symbolism of the hieroglyphs for West and East respectively as "land of the Ostrich Feather" or "of the Feather-wearer," i.e. Libyan, and "hill-land of Copper" (Sinai). These, applying naturally to the Mareotic regions and Marmarica in the West and the Sinai mining region in the East, indicate that the signs were invented in Lower Egypt. Lower Egypt was therefore the region of highest culture at the remote period when the signs were invented. *Die Zeichen für "Westen" und "Osten" in der ägyptischen Hieroglyphenschrift* (Sitzungsb. Berlin Acad. 1921, 298).

The characteristics of Eighteenth Dynasty hieratic have hitherto been hardly realised owing to the scarcity of well-dated documents. MÖLLER, to whom we already owed a magnificent palaeography of hieratic in three volumes now brings together the material dated between Amenophis I (Ebers Papyrus) and Ramesses II in papyri, graffiti, etc., and so establishes a series by which many other texts can be assigned to their true age, thereby upsetting some current attributions. *Zur Datierung literarischen Handschriften aus der ersten Hälfte des Neuen Reichs* (Zeitschr. f. äg. Spr. LVI 34).

RELIGION.

Articles relating to Egypt in HASTINGS' *Encyclopaedia of Religion and Ethics* vol. xi are *Saints and Martyrs* (Egyptian) including pagan heroes, by BARTON, *Salvation* (Egyptian) by BLACKMAN, *Scarabs* by HALL, *Sin* (Egyptian) by BLACKMAN, *Soul* (Egyptian) by BARTON, *Soul-house* by PETRIE, *Sphinx* by BAIKIE.

GAUTHIER *Le Dieu Nubien Doudoun* (Revue Égyptologique N.S. ii 1) collects the material relating to this interesting but obscure god, ranging from the Pyramid Texts to Ptolemaic temples; he deems improbable the suggestion that he is identical with Tithonus.

LANGE has published a volume of translations into Danish of religious texts, with introduction and explanatory index. *Religiøse Tekster fra det gamle Aegypten*.

KUNKE *Zur Deutung der ägyptischen Götter* (Intern. Archiv f. Ethnographie 1918) treats the Egyptian gods as lunar.

MERCER writes on the question *Was Ichnaton a Monotheist?* (*Journal Soc. Oriental Research*, Chicago, Oct. 1919). PEET summarises recent controversy as to his personality and his political and religious aims in the monotheistic heresy, *Journ. of the Manchester Oriental Soc.* ix 39, cf. *Ancient Egypt* 1921, 61.

JÉQUIER observes that the gods of the Ennead of Abydos, whose names are recorded by Tuthmosis I, correspond to the divine standards figured with the Abydos "reliquary" (but see above p. 205) in the temple of Sethos I. Here, as in the *heb-sed* festival, the standards appear to represent the cosmogonical powers and to be collectively emblems of re-birth rather than totems of clans or military standards. *L'Ennéade Onirienne d'Abydos et les Enseignes sacrées* (*Comptes Rendus de l'Acad.* 1920, 409).

KUENTZ in an elaborate article shows that *Akhi*, commonly translated "horizon" was properly the land of the sunrise among the mountains east of Egypt; in it dwelt Akhit-people, and apparently from it the god Horus was considered to have come. Later the term was applied also to the land of the sunset, and eventually to distant regions all round Egypt. *Autour d'une conception Égyptienne méconnue: l'Akhit ou soi-disant horizon* (*Bulletin Inst. Franç. au Caire* xvii 121).

MERCER writes on *The "Eye of Horus" in the Pyramid Texts* (*Journal Soc. Oriental Research*, Chicago, March 1920), reviewed *Ancient Egypt* 1921, 61.

PREIBISKE, *Vom göttlichen Fluidum nach ägyptischer Anschauung* (the first pamphlet of a series projected by the newly-founded Institute of Papyrology at Heidelberg). The distinguished papyrologist accepts Maspero's view that the god communicated to the king a divine fluid; but whereas Maspero identified this fluid with the *sa*, Preisigke would equate it with the *ka*. The fluid was re-absorbed by the god on the death of the king. Certain Graeco-Egyptian and early Christian magical practices can be interpreted accordingly.

THOMAS writes on the question *What is the ka?* (*Journal* vi 265) comparing it to Ewe *aklama*, Ga *kla* "genius" and denying that it is a totem. Here and in *The Burial Rites of West Africa in relation to Egypt* (*Ancient Egypt* 1921, 7) he quotes various parallels from West Africa to Egyptian beliefs and words and in the latter gives a statement of the highly variable features of African burial customs, some of which have parallels in Indonesia, in the hope that Egyptologists may help to explain the existence of such parallels. A review of ROSCOE's paper on the *Worship of the Dead as practised by some African tribes* (*Uganda*) which was published in *Harvard African Studies* vol. i suggests Egyptian parallels.

BLACKMAN has contributed to *Theology* i Sept. 1920 a paper entitled *An Ancient Egyptian Foretaste of the Doctrine of Baptismal Regeneration*.

In an elaborate essay BLACKMAN shows the considerable place which women held in temple services, as musicians, Hathor-maidens, and "concubines," and traces the influence of Heliopolis in this. *On the position of women in the Ancient Egyptian Hierarchy* (*Journal* vi 8). MACE *Hathor Dances* (*Journal* vi 297) supplies a modern instance of women dancing with tambourines along the path to the cemetery at some interval after a funeral as illustrating a passage in *The Tomb of Amenemhät*.

SPIEGELBERG points out that a tomb at Aphroditopolis published by Mackay was of the sacred cow of Hathor, identified with Isis and named Hasi, which name he recognises in a Greek papyrus under the form *Hesis*. *Die Begräbnisstätte der heiligen Kühe von Aphroditopolis (Atfih)* in *Or. Lit.-Zeit.* xxiii 258.

WILCKEN who has been studying MARIETTE's accounts of the excavation of the Serapeum for his new edition of the Serapeum papyri, has come to the conclusion that the Hellenistic Serapis was based on the native god, the abstraction of the dead Apises (this he will expound in his publication of the papyri), also that Memphis had no special temple of the Hellenistic form of Serapis, but only the one great temple of the Egyptian Osiris-Apis. The situation is thus: Over a mile back in the desert, opposite Memphis, lies the well-known Serapeum, the burial place of the Apis bulls; from it two parallel walls lead about 100 metres eastward to a small temple of Nectanebo and on and about these walls Mariette found a small Greek temple and other Greek monuments. The alley of sphinxes, a mile long, leads on to another group of Egyptian temples upon the edge of the desert; it was here that Mariette wrongly placed the "Greek Serapeum" for which there is no warrant. The above information is derived from a long article in which Wilcken describes the Greek monuments found by Mariette, most of which were re-buried by the discoverer (and incidentally adds to the instances of the sacred "Drowned"); they appear to be Dionysiac, set up by the Greek colony of Memphis. *Die griechische Denkmäler vom Dromos des Serapeums zu Memphis* (*Jahrbuch d. Deutschen archäol. Inst.* xxxii 149).

DARESSY publishes a representation on a coffin of the mythical Seth-animal having the ears of an ass and the name *asha* as in the Harris Magical Papyrus *L'animal Séthien à tête d'âne* (*Ann. du Service* xx 165).

BÉNÉDITE announces the acquisition by the Louvre of a group representing Ammon protecting Tutankhamun, wearing the panther skin as well as royal insignia *Comptes Rendus de l'Acad.* 1920, 174.

LEFEBVRE shows that Heron whose name appears in Heroopolis, etc. and who is figured on monuments of Ptolemaic date, was the Thracian equestrian god. *Le Dieu Hērō d'Égypte* (*Ann. du Service* xx 237).

PERDRIZET writes on the late bronze figures of Anubis *Les représentations d'Anubis dans l'imagerie gréco-Égyptienne* (*Rev. Égyptologique* N.S. i 185).

SCIENCE.

The last of the unfinished treatises left by the late Sir ARMAND RUFFER was *On the Physical Effects of Consanguineous Marriages in the Royal Families of Ancient Egypt*, now published in the *Proceedings of the Royal Society of Medicine*, xii, 145; after reviewing the history of the personages concerned, Pharaonic and Ptolemaic, the author doubts if the effect was detrimental.

Minute examination of 121 skulls from the southern cemeteries (Prehistoric-Protohistoric), and of 59 from the northern cemeteries (C-group and Middle Kingdom), excavated by Junker at El-Kubanieh north of the First Cataract, TOLDT *Anthropologische Untersuchung der Menschliche Überreste aus den altägyptischen Gräberfeldern von El-Kubanieh* (*Denkschriften der Vienna Academy, Mathem.-Naturwissenschaftl. Kl.* 96 Bd. 1919). There is no considerable admixture of negro characteristics in any of the remains.

Dr ARVANITAKIS offers a new interpretation of the historical "bull's blood" as a poison, suggested by an ingredient employed by Egyptian women when attempting to poison their husbands. *Le Suicide de Psamménite* in *Bull. de l'Institut d'Égypte* ii 9.

RANKE reviewing WRESZINSKI's *Der Papyrus Ebers*, i Theil, Umschrift, urges the need for completing the edition of this famous medical papyrus of which no trustworthy account exists. (*Or. Lit.-Zeit.* xxiv 92.)

The cereals of Ancient Egypt are mainly of three kinds, (1) *bôte* = *Triticum diocetum*, a variety of spelt known in Germany as Emmerkorn, (2) *swe* = wheat, *T. turgidum* and *T. durum*, (3) *yôt* = barley, *Hordeum hexastichum* and *H. vulgare*. Of these barley occurs in predynastic graves, but *bôte* seems to date first from the Old Kingdom, becoming at once the principal bread-cereal. Cultivated barley may have been developed from a wild native, but the spelt and wheat came from the East. SCHULZ *Die Getreide der Alten Ägypter und Beiträge zur Kenntniss der Geschichte der Spelzweizen im Altertum* (*Abh. d. Naturforschenden Gesells. zu Halle* N.F. Nos. 5, 6 1916, 1918). The same authority in November and December 1916 published in detail the results of examining specimens, dated and otherwise, of ancient Egyptian wheat, barley and spelt. *Berichte der deutschen botanischen Gesells.* xxxiv: p. 601 *Über die Nacktweizen der alten Ägypter*, p. 607 *Über die nackte und die beschaltete Saatgerste der alten Ägypter*, p. 697 *Der Emmer des alten Ägyptens*. All of these papers appear to be of high scientific value.

MÖLLER reproduces a small object bearing the name of Merenptah from the plates of Macalister's *Gezer* ii 331, recognising in it a portable sun-dial, the first to be noted of Pharaonic age. (*Zeitschr. f. äg. Spr.* lvi 101).

LITERATURE.

A Leyden papyrus, GARDINER's *The Admonitions of an Egyptian sage*, is utilised by FARINA who translates large portions of it as depicting the results of a revolution between the Sixth and the Twelfth Dynasty, *Rivolgimenti politici nell'antico Egitto* (*Aegyptus* ii 3); Erman's recent work upon it *Die Mohnworte* is reviewed by WIDEMANN (*Or. Lit.-Zeit.* xxiii 210).

MONTET *Sur quelques passages des mémoires de Sinouhit* (*Revue Égyptologique* N.S. ii 56) translates B. 89-91 "people snared for me and planted for me, apart from what my hunting-dogs caught," B. 264-265 "Behold Sinuhe who is come as an 'Aam, the boomerang-thrower of the Setiu-people," with interesting remarks on the sign of the throw-stick and on abbreviated writings and the values of signs; and argues that there is nothing foreign to Egypt and nothing typically Syrian, in the description of the Syrian life of Sinuhe.

*MÖLLER contributes to a treatise on the history and origin of the parable of Lazarus, a new translation of a very fragmentary parallel in the Second Story of Sethon Khamois on a papyrus of the first century A.D.; utilising a brilliant suggestion which the late Sir G. MASPERO made in his *Contes populaires*, Möller finds the Lazarus-story associated in the papyrus with that of the hardworking Ocnus and his extravagant wife, apparently borrowed from a Greek source. He also provides some remarkable illustrations of the episodes from late Egyptian monuments. GRESSMANN *Vom reichen Mann und armen Lazarus* (*Abh. Berlin Acad.* 1918).

LAW.

For an important work on suretyship, see above p. 206.

MÖLLER *Das Amtzeichen des Oberrichters in der Spätzeit* (*Zeitschr. f. äg. Spr.* LVI 67). Aelian and Diodorus agree with late Egyptian texts and sculptures in proving that the badge of the Chief Justice was a figure of the goddess of Truth hung from the neck, its material *σασφαιρος* being lapis-lazuli. This leads to a correction of the reading in a fragmentary passage of the Gnomon.

SCHUBART *Rom und die Ägypter nach dem Gnomon des Idios Logos* (*Zeitschr. f. äg. Spr.* LVI 80). The Idios Logos was a department concerned with fines and confiscations; Augustus drew up a Gnomon or imperial regulations for its guidance, and a papyrus recently published by Schubart, dating from about 150 A.D., contained about 120 paragraphs representing so many extracts from the complete Gnomon. Schubart here gives those items which are of special interest to Egyptologists—chiefly concerning the intermarriage of different grades or nationalities, Romans, Greeks and Egyptians, and those regarding the priesthood and religious rites.

ARCHAEOLOGY.

Professor PETRIE has published a volume entitled *Prehistoric Egypt, illustrated by over 1000 objects in University College, London*, a wonderful gathering of objects and designs, carved figures, stone vases, mace heads, etc. etc. including any natural descendants in the Protodynastic age, all carefully classified, with summary descriptions. The published graves of the prehistoric ages in Egypt and in Nubia are here so far as possible all attributed to their proper positions in the sequence scale. PETRIE distinguishes and characterises two successive civilisations occupying the country, followed by a break up and gradual occupation of Egypt by the dynastic race, the prehistoric civilisations extending over a period of several thousand years. The flint work alone is excluded from consideration in this volume, and a series of plates of types of pottery and alate palettes is to be issued separately.

The issue of a bulky third livraison of JÉQUIER'S *L'Architecture et la Décoration dans l'Ancienne Égypte*, completes the first volume, having the sub-title *Des sanctuaires primitifs aux temples de la XVIII^e dynastie*. It now consists of eighty magnificent plates, photographic and drawn, of plans and architectural detail, with a brief but luminous introduction.

KEES publishes and studies scenes from tombs of the Old Kingdom at Hierakonpolis, Hemamieh and other places with the view of determining how far local schools of sculpture can be said to have existed then. In the Fifth Dynasty the local work is practically identical with that of Memphis; in the Sixth Dynasty a moderate degree of independence can be detected. *Studien zur ägyptischen Provinzialkunst*, reviewed by WRESZINSKI *Or. Lit.-Zeit.* XXIV 160.

In the Catalogue of the Cairo Museum, *Naoi* by ROEDER, though dated in 1914 appears to have been issued quite recently. It is a very elaborate publication of no less than fifty shrines.

The Leyden Museum has issued a further volume of its fine coffins of the New Kingdom *Mumienströge des Neuen Reiches*, 17te Serie, containing photographs of the coffin of Ankheseinque, a priest of Ammon, two coffins of Pnabsi priest of Ammon and two of a woman Tchoiri ("the Syrian") of about Dyn. XXI. Rough drawings of all but the last pair were published by LEEMANS in the old series, and are useful but give no idea of the fineness of the work. RANKE has reviewed the Second and Third Series in *Or. Lit.-Zeit.* XXIV 126.

Fraülein FECHHEIMER, who in 1914 published a selection of photographs of Egyptian sculpture *Die Plastik der Ägypter*, has produced a companion volume illustrating minor work, *Kleinplastik der Ägypter*, containing 128 plates of statuettes etc., largely taken from the Berlin collection, in various stones, wood, bronze and fayence, with an introduction in which are quoted new translations of important texts by Erman, Sethe and others.

Lahun I, the Treasure, by Guy BRUNTON describes the tombs and pits inside the enclosure of the Lahun Pyramid of Sesostris II, all on its S.W. edge, and publishes the wonderful jewellery of a princess, now divided between Cairo and the New York Metropolitan Museum. This was extracted by Mr Brunton from the hard mud with the utmost patience. The observations made at the time and the care and ingenuity expended upon its restoration by Professor Petrie and by Mr Mace and Mr Winlock at New York have made this find of the highest importance in the history of Egyptian personal ornaments.

A valuable paper by FORSDYKE on bronze and iron arrowheads said to have been found at Marathon, including the discussion of types found in Egypt, is printed in *Proceedings of Soc. of Antiquaries* 1920, 146.

A bronze axe "at Tell el-'Amarna" and a copper axe "from the tomb of Nekht, superintendent of soldiers under Rameses III, found at Kurnah," both formerly in the Greenwell collection and now in the British Museum, are illustrated in a volume entitled *Charles Hercules Read, a Tribute and a Record* offered to Sir Hercules Read by his friends on his retirement from the Keepership of the Department of British and Mediaeval Antiquities. A number of limestone models of early Ptolemaic helmets from Memphis, with a bronze cap from Egypt in Berlin, are published by SCHRÖDER *Ägyptische Helmmodelle* (*Architologische Anzeiger* 1920, 3).

In various journals the following articles on archaeological subjects occur:

Journal of Egyptian Archaeology. VI 224, CAPART *Some Remarks on the Sheikh el-Beled*, shows that two types of statues of the deceased might be deposited in important early tombs, the one without wig and wearing a long tunic, the other with wig and loin cloth; analogy and documents seem to prove that the Sheikh el-Beled and a corresponding wooden torso of the second type both represent "the chief lector Ka-'aper" of Dyn. IV and that they were accompanied by a wooden statue representing his wife; all three are still in the Cairo Museum. VII 1, DAVIES *Mural Paintings in the City of Akhetaten* discusses the remnants found in 1891-2 by PETRIE and catalogues the fragments brought away: the paper is illustrated by a charming drawing—the work of Mrs Davies—of the group of two little princesses in the Ashmolean Museum at Oxford, a restoration of the family scene of which it formed part (comprising not less than five of these princesses and therefore belonging to a late date in the reign of Akhenaton) together with outline drawings of most of the fragments. VII 31, CAPART, *The Memphite Tomb of King Haremhab* publishes for the first time several finely sculptured slabs in Bologna (one of which fits a slab recently acquired by the Berlin Museum) and almost conclusively proves that they came from this tomb; these newly identified portions include the well-known unique representation of a horse with rider; a scene of Haremhab at work along with servants in the mythical Fields of Yaru gives rise to some interesting remarks. VII 36, MACE *A Group of hitherto unpublished Scarabs in the Metropolitan Museum New York* publishes thirty scarabs of private persons, Hyksos kings and the queen Shpenwopi (Shepenupet).

Ancient Egypt. 1921, 4, MACE *The Lahun caskets* as reconstructed at New York, from the famous find of jewellery. 1921, 13, PETRIE *A negro captive* in bronze, perhaps intended to decorate a royal footstool, in the Museum of the New York Historical Society, reproduced from Mrs Williams' account. 1921, 39, MACKAY *Theban Borders of Lotus and Grapes*, a classification of examples of this motif in New Empire tombs from Tutmosis IV to Horemhab. 1921, 42, GARDNER *A Head of a Barbarian from Egypt* Hellenistic, of marble, probably of a Germanic soldier, much battered, but showing peculiar form of head and moustache. 1921, 51, review of BATES, *Ancient Egyptian Fishing*. 1921, 53, review of PAGENSTECHER *Die Griechisch-Ägyptische Sammlung Ernst von Sieglin*, and *Nekropolis, Untersuchung über Gestalt und Entwicklung der Alexandrinischen Grabanlagen*. 1921, 62, review of LYTGOE *Statues of the goddess Sekhmet*.

Bulletin of the Metropolitan Museum, New York, July 1920 Second Part, The Egyptian Expedition 1916-1919 DAVIES *The work of the Tytus Memorial Fund* (copying Theban private tombs) illustrated by remarkable examples of free drawing of animals, etc., especially from the tomb of Apy (no. 217), showing that the effect of the break with tradition marked by the Tell el-'Amarna heresy survived into the beginning of Dyn. XIX. *N.Y. Historical Society, Quarterly Bulletin* IV 67, Mrs C. R. WILLIAMS *An Egyptian Chair in the Anderson Collection* of the early part of Dyn. XVIII, bought in Thebes 1847-1848, figured with careful description. IV 91, Mrs C. R. WILLIAMS *An Egyptian sketch on limestone*, photograph of an ostrakon in the Abbott collection, representing a humanised rat obsequiously attending a cat.

Berliner Museen. Berichte aus den Preussischen Kunstsammlungen. XLII 15, SCHÄFER *Ein Griechisch-Ägyptisches Relief* publishes a slab of beautiful relief work influenced by Greek art showing a man, woman and child bringing offerings including Greek garlands [evidently from the Derwah tomb, above p. 205].

Zeitschrift für Ägyptische Sprache. LVI 96 STEINDORFF *Eine Statue der Frühzeit* a very primitive statue in limestone of a man seated on a stool, from Abusir near the Pyramids, unfortunately without inscription, probably the earliest known in "Egyptian" style, and attributed to Dyn. II. The eyes have been inlaid.

Orientalistische Literaturzeitung. XXIV 124 review by WRESZINSKI of SCHÄFER *Von Ägyptischer Kunst*.

Annales du Service des Antiquités de l'Égypte. XX 8, DARESSY *Les statues Ramessides à grosse perruque* enumerates the statues with thick wigs cut square in front, in three classes—with two standards, with one standard, and with various attributes. Daressy shows that the type apparently began under Amenophis III and ceased in Dyn. XX, and that there is no reason whatever for attributing any instance to the Middle Kingdom.

Jahrbuch der Schiffbautechnischen Gesellschaft (Berlin) xx (1919) 187. BUSLEY *Schiffe des Altertums*, paper with discussion following, giving a detailed account of Egyptian boats in Old Kingdom and New Kingdom, with many illustrations.

Two sale-catalogues of Egyptian antiquities were issued in 1920 by Messrs Sotheby and Wilkinson—on 13-17th June the sale of the important Amherst Collection (including the collections of Dr Lee of Hartwell House, Dr Lieder, etc.) with illustrations; on May 23-24 Egyptian antiquities from various sources.

PERSONAL.

The sad death in 1920 of Boris TURAEFF is the subject of a paragraph in the *Journal* vii 109. He was a pioneer in Russia of the study of Oriental history and of the Egyptian and Coptic languages, and succeeded in forming a school of young students both in Egyptology and Assyriology which was only dispersed by the Bolshevist extermination of science and learning. Let us hope that the seed sown by Turaeff will bear fruit again in the happier days which must eventually come to Russia.

The name of Jesse HAWORTH will long be remembered in Manchester as that of a generous supporter of Egyptology, as of many other good causes. Mr Haworth's gifts to the Ashmolean Museum and Bodleian Library at Oxford and to the British Museum were also very important. Miss CROMPTON, curator of the Egyptian collections in the Manchester Museum, has described the large share which he took in supporting the early work of Flinders Petrie, *Jesse Haworth, First President of the Manchester Egyptian Association* (with portrait) in *Journal of the Manchester Egyptian and Oriental Society*, ix 49.

The last volume of the *Zeitschrift für Ägyptische Sprache* (vol. Lvi) marks the twenty-fifth year of Professor STEINDORFF's work as editor of that admirable periodical. Professor ERMAN, as a former co-editor, and the publisher unite in a foreword of appreciation, *An Georg Steindorff*.

Recent additions to the *Bibliothèque Égyptologique* are E. LEFÈVRE *Œuvres Diverses* tome III (1915) containing published work from 1896 to 1900 and two new essays *L'Aruspicine* and *Le Chant du cygne*; G. MASPERO *Études de Mythologie et d'Archéologie Égyptiennes* t. VIII (1916)—work dating between 1901 and 1908; E. de ROUGÉ *Œuvres diverses* t. VI (1918) from 1864 to his death in 1872, including the posthumously printed essay on the origin of the Phœnician alphabet, the MS. of which dates from 1859.

NOTES AND NEWS

THE thirty-eighth Annual General Meeting of our Society was held on May 25th last at the Society's offices, Mr F. W. Percival in the chair. All retiring Officers were re-elected, with one exception, and the Committee's Report and the Balance Sheet for the year were adopted unanimously. The printed Report of the meeting was issued in July.

The annual exhibitions of objects from the Egypt Exploration Society's excavations were resumed this year, after a seven years' interval. The exhibition, opened by the Right Hon. the Earl of Carnarvon, a Vice-President of the Society, was held at the rooms of the Society of Antiquaries, Burlington House, from July 4th to 13th, and consisted mainly of objects obtained from Tell el-Amarna last season, together with water-colour copies or restorations of wall-decorations and plans of the site. The remarkable specimens of glass, photographs of which illustrate Prof. Peet's article in this number of the *Journal*, attracted special interest.

A lecture, well attended, was delivered on July 7th by Prof. Peet at the Royal Society's rooms at Burlington House on "The Season's Work at Tell el-Amarna." General the Right Hon. Sir John Maxwell, President of the Society, being in the chair. The very interesting lecture given to us by Professor Langdon on April 27th is printed in the present number.

The Society's excavations on the site of the city of Akhenaten at Tell el-Amarna are being continued this autumn, and the season's work will in all probability commence within a few days of the issue of the present number of the *Journal*. Prof. Peet being now unable, by reason of his official duties at Liverpool University, to continue his excavations for the Society, so ably carried out by him during several seasons in the past, the present campaign has been placed in charge of Mr C. Leonard Woolley, well known for his field work in Syria and Nubia. The other members of the camp staff, as arranged at the time of going to press, comprise Messrs F. G. Newton, P. L. O. Guy (both of whom assisted Prof. Peet last season), and Battiscombe Gunn.

To those who are interested in our work at Akhetaten the Secretary will be pleased to send, on application, a copy of the illustrated brochure, *The proposed Excavations at Tell el-Amarna*, which, although issued before the commencement of the Society's work there this year, is by no means out of date, containing an account of the great and many-sided significance of this site, and a *résumé* of previous work done there by Prof. Petrie and the German Orient-Gesellschaft. Separate copies of the remarkable coloured plate, "The Daughters of Akhenaten," by Mrs N. de G. Davies, which forms the frontispiece of this volume, are supplied at the price of 2s. 6d.

The brief account of the Archaeological Survey's resumption of work at Meir during the early part of this year which was communicated in our Committee's Report may be somewhat amplified here. Dr Blackman's season extended from January 14th to April 18th, during which time he succeeded in completely copying and recording the large Sixth Dynasty tomb-chapel of Pepi-onkh the Middle, that discovered in 1913 by Seyd Bey Khashabeh. This chapel consists of (1) a courtyard with memorial stelae on the north and

south walls and with reliefs and two long biographical and other inscriptions on the west wall, (2) a large chamber decorated on all four walls with painted reliefs, (3) an uninscribed inner chamber, in which was discovered a portrait-statue of Pepi-onkh accompanied by his wife, (4) a small uninscribed chamber on the north side of the courtyard, and (5, 6) two underground burial-chambers decorated with paintings and the so-called "List of offerings." Dr Blackman was assisted by two of his pupils, Messrs D. G. Vaughan Forster and G. F. Chambers. The volume containing the full publication of this tomb will be issued shortly, under the title *The Rock Tombs of Meir*, Part iv.

Some news is to hand regarding other projected field-work this winter. The Metropolitan Museum of New York will again be active, at Lisht (where Mr A. C. Mace will continue his work at the Northern Pyramid) and at Thebes, where Mr N. de G. Davies and his assistant Mr C. K. Wilkinson will resume the task of copying the Private Tombs in line and colour for the Tytus Memorial Fund, particularly that of Neferhotpe of the time of Ay (No. 49) the only existing records of which we owe to Hay and Wilkinson; the excavations in the Asasif will be continued, and some work will also be done on the temple site at Dêr el-Bahri. Mrs Davies will probably divide her time between work for the Metropolitan Museum and for the Theban Tombs Series (published under the auspices of our Society); for the latter enterprise the tomb of Menkheperresonb (No. 86) has been selected. The Harvard-Boston Expedition will resume excavations at the northern group of pyramids at Kabushiyeh; the work will be directed by Mr Dows Dunham during the absence of Prof. G. A. Reisner, who is returning to Harvard University, after ten years' absence from America, to lecture during the first half-year. On behalf of the Sudân government, Prof. and Mrs Seligman are spending the winter in the Sudân, to continue the ethnographical survey work that they were carrying out for the Government before the war. The main region selected, in view of the present stage of our knowledge of Eastern Africa, is that of the Nilotic tribes on the eastern bank of the Nile, especially Mongalla Province and the neighbourhood of the Uganda border; should circumstances permit, they will spend a short time on the western bank in what was the old Lado enclave, of the inhabitants of which even less is known than of those of the eastern bank. Prof. Petrie prefers to make no statement regarding his plans.

The Editors of the Graeco-Roman Memoirs hope (as stated in the Annual Report) that *The Oxyrhynchus Papyri*, Part xv, which consists entirely of theological or classical literary texts, will be issued towards the end of this year. With this volume off their hands the Editors will be set free to carry out the distribution of papyri already published in the Graeco-Roman Memoirs to museums, libraries and other public collections. Part xvi of *The Oxyrhynchus Papyri*, containing non-literary texts of the Byzantine Period, is well advanced, and will go to press early next year.

An exhibition of Ancient Egyptian Art, the finest ever organized in this country, was held from May 10th until the end of July by the Burlington Fine Arts Club, in conjunction with our Society, in the rooms of the former at 17, Savile Row, W. The collection was not large, but bringing together as it did the greater number of the most beautiful specimens of Egyptian work in this country outside the British Museum, and some also from abroad, to the exclusion of all but the very best, it made an unforgettable impression upon those who viewed it. Among those who lent their choicest specimens for this purpose were the Senate of the University of London (from the Egyptian Collection at University College), the Governors of Eton College (from the Myers Collection), the Musées Royaux du

Cinquantenaire, Brussels, the Manchester Museum, Lord Carnarvon, Lord Carmichael, Sir Hercules Read, Sir Arthur Evans, the Rev. William MacGregor, the Rev. Randolph Berens, Mr Oscar Raphael, Mr Henry Oppenheimer and Mr Horace C. Beck. A Private View was held on May 9th, and by the courtesy of the Committee of the Burlington Fine Arts Club the exhibition was throughout open to all members of our Society and their friends. Although the attendance was at first not great, it soon rose, as the exhibition became better known, to little short of a hundred a day. A fine illustrated Catalogue of the exhibition is to be published shortly, at a price not exceeding five guineas.

The Society's Library continues to receive accessions by gifts from individuals, learned societies and museums, by exchange, and by the incorporation of works sent by publishers for review in the *Journal*. The cataloguing of the volumes is being proceeded with by Miss M. C. Jonas, and although the arrangements are not yet completed under which Members can borrow books, all these may now be freely consulted at the Offices. Mr F. W. Percival, our Hon. Librarian, appeals for further donations of books to the Library, which, despite the munificent gifts of Sir Herbert Thompson, the Trustees of the British Museum, and many others, still lacks a number of works of fundamental importance.

The most important sale of Egyptian antiquities ever held in England took place from the 13th to 17th of last June, when the collections formed by the late Lord Amherst of Hackney and his daughter, the late Lady William Cecil, from 1861 onwards, were disposed of by Messrs Sotheby's. 917 lots of Egyptian objects (the well-known Amherst Papyri were not included in the sale), together with 47 lots of cuneiform tablets and other antiquities, were put up to auction, the total sum realized being £14,533. 5s. A curious feature of the sale was that while the finer pieces obtained astonishingly high prices (twenty lots of these, single objects in all but three cases, alone totalling £8445), the less valuable objects, which were in the great majority, went for very little indeed. The greatest amount was realised by the Twelfth Dynasty squatting statue, in red crystalline limestone, of the Steward and Numberer of Cattle, Senusertsenb (Lot 248), for which £1870 was paid. High figures were also reached by a small Eighteenth Dynasty painted wooden statuette of a lady (Lot 385), £1000; a sculptor's trial-piece from Tell el-Amarna, with head of Akhenaten in incised relief (Lot 847), the same sum; a small limestone statuette of a squatting official reading a document, of the reign of Amenophis III (Lot 255), £800; and a small wooden statuette of a man, identical in size and technique with Lot 385, and believed to come from the same tomb (Lot 384), £610. It is understood that a number of the best objects have gone to the United States. The illustrated Catalogue of this remarkable sale has a permanent archaeological value.

The British School of Archaeology held an exhibition, from July 4th to 30th, of two seasons' work, namely at El-Lahun and Ghorab 1919-20, and at El-Lahun and Sedment (Herakleopolis Magna) 1920-1. A large number of objects of nearly all periods were shown, those dated from the Sixth to Twelfth Dynasties being specially copious and interesting.

The death of Jean Lesquier, one of the leading papyrologists of Europe, at Neuilly-sur-Seine on June 28th last, in his forty-second year, is a grievous loss, not only to papyrology, which had already suffered so greatly during the war by the deaths of scholars of high promise, but to the field of ancient history generally. We are indebted to Mr H. Idris Bell, a personal friend of the late scholar, for the following notes on Lesquier's life and work:

"Born at Lisieux, to which he cherished a faithful attachment, and where he was

buried on July 2nd, Lesquier received his early education there. In due course he entered the École Normale Supérieure, where, under the inspiration of his professor, M. Gustave Bloch, he first turned to ancient Egypt, and chose for the subject of his diploma thesis *Le Recrutement de l'armée romaine en Égypte au I^{er} et au II^e siècles*. His interest in papyrology being awakened, and being anxious to study the papyri at first hand under a recognized master, he twice visited Berlin; the fruits of these visits are to be seen in Vol. IV of the Berlin (Greek) Papyri, which contains several texts edited by him. When, in consequence of Prof. Jouguet's mission to Egypt, Lille University acquired a valuable collection of papyri, Lesquier obtained an appointment to a lycée at Saint-Quentin in order to be near the school of papyrology which Jouguet was establishing, and formed a friendship with the latter which was to last for the remainder of his life. Jouguet and Lesquier collaborated in the preliminary publication of one of the Lille papyri (*Plan et devis de travaux de l'an 27 de Ptolémée Philadelphie*, in *C.-R. de l'Ac. des Inscr. et B.-L.*, 1906); and later Lesquier, with Jouguet, initiated the scheme to publish the new papyri which resulted in the series *Papyrus grecs*, published by the Institut Papyrologique of Lille under the editorship of Jouguet, assisted by Collart, Lesquier and Xonal. Lesquier was himself responsible for fasc. II-IV of Vol. II of this series, an admirable republication of the Magdola papyri, found and first published by Jouguet and Lefebvre.

"In 1908 Lesquier was able to visit Egypt, and conducted excavations at Tehneh for the Institut Français at Cairo, on which he published an excellent report in the *Bulletin* (VIII). He was preparing, in the autumn of the same year, to return to Cairo, when signs of consumption revealed themselves, making it necessary not only to abandon all thoughts of visiting Egypt but to alter his whole manner of life. Henceforth he could spend only the summers in Normandy; the winters he passed, at first in the mountains, later in Provence. In those years of constant migrations between north and south he accomplished an amazing amount of work. His two principal works during this period dealt with military affairs in Egypt. The first, *Les institutions militaires de l'Égypte sous les Lagides* (Paris, 1911), was devoted to the Ptolemaic period; the second, *L'armée romaine d'Égypte d'Auguste à Dioclétien* (*Mém. de l'Inst. fr. d'arch. or. du Caire*, XII), to the Roman. Both works are admirable examples of fine scholarship. Like all that he wrote, they show the union of wide erudition with finely critical judgment, of untiring patience in research with a gift of lucid and attractive exposition. Besides these volumes he published various articles and reviews. He devoted special attention to the difficult subject of the Ptolemaic Calendar; this was the theme of an article, *Sur deux dates d'Evergète et de Philopator*, in *Archiv für Papyrusforschung*, IV, 284-297, and to it he returned in his latest publication, *Les nouvelles études sur le calendrier ptolémaïque*, in *Rev. égypt.*, II, 128-164. At the time of his death he was engaged on two works of considerable scope, a "volume de vulgarisation sur l'Égypte" (I take this from a funeral oration by Jouguet) and a book on the early Mediterranean civilizations, to form the first volume of an *Histoire universelle*, published by his friends Sagnac and Halphen.

"But Graeco-Roman Egypt was not his only interest. He devoted himself also to Egyptology proper, and the result was a translation, or rather adaptation, of Erman's grammar (*Grammaire égyptienne*, tome VIII of the *Bibliothèque d'Étude*, Cairo, Institut français, 1914). He was moreover an eager student of mediaeval antiquities, and to him was chiefly due the revival and extension of the Société Historique of Lisieux. For three years he conducted profitable excavations in the cathedral of that city; and he was the main

agent in starting the valuable series of *Études lecoriennes*, of which two volumes have appeared, each containing an article by him on the administration of his native city.

"Lesquier was no mere researcher, detached from the world about him; on the contrary he took a lively interest in contemporary events, and particularly in English affairs. He wrote English fluently, loved the society of Englishmen, and rarely omitted in his letters to me to ask some question about English politics. In our literature too he took a keen interest. With all this, he had a singularly attractive personality. Ardent, generous, courageous, unselfish, quick in sympathy, he won the affection of all who knew him; and the noble courage with which he faced his misfortunes will not be forgotten by them."

We have received the following communication from Colonel H. G. Lyons, F.R.S.:

"In 1891 the late Sir Norman Lockyer suggested that many temples in Egypt had been built so that their axes were directed on a rising or setting heavenly body on a particular day of the year; and he proposed to deduce from this a date for their original foundation. The temple of Luxor seemed to furnish a crucial test of this hypothesis, as it provides a case of two changes in direction of the axes of successive additions to the oldest portion of the temple. This had been attributed to the slow change in the apparent position of the observed star and the consequent change of axis to keep it in view. Dr L. Borchardt, however, showed that the requirements of the site, and the existence of another temple close to that of Luxor, were sufficient to account for the changes of axis. The Karnak temple was held by Lockyer to be a solar temple, having its axis pointed at the setting sun at the time of the summer solstice, so that the sun then shone down the axis of the temple and illuminated the sacred images in the naos. On October 19, 1911, Mr Howard Payn published a letter in *Nature*, stating that he had made further observations, and that he considered these to confirm the original observations, which pointed to a date of 3700 B.C. for the foundation of the temple.

"To settle this question the Survey of Egypt took steps to determine accurately the azimuth of the temple axis; this was done in 1913, and was verified in 1914 by a complete survey of the temple axis from end to end on the scale of 1:200. The results have just been published by the Survey of Egypt in a Departmental Paper (F. S. RICHARDS, *Note on the age of the Great Temple of Ammon at Karnak as determined by the orientation of its axis*; Survey Paper No. 38, Cairo, 1921). This establishes the facts that the sun does not shine down the temple axis at the summer solstice and that the date when it might have done so must be so remote as to give an impossible date for the foundation of the temple on Lockyer's hypothesis. The declination of the sun, or, what is the same thing, the obliquity of the ecliptic, would have to be $25^{\circ} 9' 55''$, but by Newcombe's formula the obliquity in 4000 B.C. was only $24^{\circ} 6' 39.6''$, an increase as compared with the present value of about $40'$. For the sun to shine down the temple axis a change of about $100'$ would be necessary, which would correspond to a date much more remote than can possibly be upheld."

The attention of Members and others may be drawn to two recent publications. The Thirty-seventh Excavation Memoir of our society, *Balabish*, by G. A. Wainwright, has been issued at the published price of 42s., the price to Members being 28s. Under the new regulations Memoirs are no longer sent out in return for annual subscriptions, but may be obtained through the Secretary. *The Mayer Papyri A and B*, by T. Eric Peet, M.A., has been published under the auspices of the Egypt Exploration Society, at the price of 50s.,

to Members 33s. The two papyri, neither of which has ever been published in photograph, or facsimile, or transcription, are described, discussed and translated at length by Prof. Peet.

Just as we go to press, a piece of news reaches us which forms a very sad commentary upon a paragraph left standing below; we have to mourn the death on the 2nd October, at Upsala, of Professor Georg Möller, the assistant director of the Egyptian collection at Berlin. During the war Möller had suffered much from malaria in the East, and on his arrival in Upsala, where he was to have delivered a course of lectures, a severe attack recurred which led to inflammation of the lungs. With Möller's death there has passed away one of the best all-round Egyptologists, a man who had distinguished himself no less as an excavator and archaeologist than as a hieroglyphic scholar, a palaeographer and a demotist. Lack of space forbids us to do anything like justice to Möller's achievement, which owing to his retiring, modest character was perhaps not fully realized during his lifetime. His monumental work on Hieratic Palaeography, in three volumes, is one of the most serviceable books which we possess; and conspicuous among his other productions was an admirable edition of the Rhind demotic papyri. To quite a different domain belongs the important volume on goldsmiths' work in the Berlin Museum. Perhaps of equal or even of greater value would have been the publications which Möller projected and for which material had already been collected: the graffiti of the quarry of Hatnub, the work on Hieroglyphic Palaeography, the history of the Libyans. In a word, Möller's premature death at the age of 44 is an irreparable loss to Science, as also to his many friends, by whom he will be remembered as a kindly, honourable man, always ready to assist others with both encouragement and active help.

In reference to Mr Davies' article on *Mural Paintings in the City of Akhetaten*, Professor Petrie writes to us as follows:—"It is to be regretted that Mr Davies, in the various talks that we had about the paintings, did not enquire about the use of high lights (see p. 4). That high light of powdered orpiment was used is certain. It was laid upon the thigh, just where reflection would appear, as a distinct band, and it was not seen on other parts of the body. Very likely its position may not be clear now, as orpiment from the background is stated to have shifted, during the disturbances of travelling, dusting, and varnishing at Oxford. The original position of the high light was noted before these changes, when it was quite clear, and it was examined with a magnifier then. Such use of lights is not to be wondered at when we see that shadows are undoubtedly marked; these may be seen in Mrs Davies' copy, down the backs of both figures, under the arm of the hinder figure, and on the further legs."

Three works of unusual importance for Egyptian Philology may be expected from Germany before very long; one of them, indeed, Prof. Spiegelberg's *Koptisches Handwörterbuch*, may be already issued before these words appear. Among other improvements on its predecessors, notably the clearness of its arrangement, is the prominence given to hieroglyphic and demotic etymologies of Coptic words. Prof. Möller has in preparation a much-needed work on Hieroglyphic Palaeography. Finally, Prof. Sethe is now completing the Palaeographical Section and Commentary of his great work on the Pyramid Texts, of which the two volumes containing the parallel texts alone have been in students' hands for some eleven years.

The Committee of our Society has elected Mr Battiscombe Gunn to the post of Assistant-Editor of the *Journal*, and he shares with Dr Gardiner the responsibility for the present issue.

NOTICES OF RECENT PUBLICATIONS

Von ägyptischer Kunst, besonders der Zeichenkunst: eine Einführung in die Betrachtung ägyptischer Kunstwerke. By HEINRICH SCHAFER. Leipzig: J. C. Hinrichs, 1919. Vol. I: pp. xii+203. Vol. II: pp. 251. Fifty-four plates.

Directors and Trustees of great public museums are to be congratulated on the quiet retreats by favour of which they escape the lash of that public inquiry into their stewardship which in many cases is conspicuously overdue. But if that day of judgment were to come like a thief in the night through which we are now living, the Director of the Egyptian department of the State Museums at Berlin would assuredly receive honourable acquittal. He is not content with acquiring a balanced and typical collection of the relics of the great nation for whose legacy to the world he has become a trustee, arranging it well, and docketing it correctly, that those whose property it is may comprehend and rejoice in it, and publishing it accurately, so that those outside his own nation may share in a possession which ought to be regarded as much more than national. Besides this he considers that his position of privilege obliges him, if the task lies within his gifts, to share with the public those lessons from the life of an ancient nation whose contribution to the material or spiritual uplifting of humanity he is best able to set in its true light and proportion.

This modest work is one we would gladly see published in an English translation, not only for its value but because it must be confessed that it is written in a style that does not lighten the strain on the reader's attention, and is printed, by an unhappy German convention, in the barbaric type reserved for literature and art, as a dead tongue is selected for solemn occasions, apparently that the reader may attain the reward of a flagellant. Under these disabilities not only is the argument likely to escape one, but the wealth of illustration, comment, and asides is not easily picked out again at need from the unfamiliar Gothic fount. But the book cannot be ignored. The student of art as such will find it deeply interesting and fruitful, and the practised Egyptologist as he reads will become ashamed that these reflections and observations either have never occurred to him or have never been given their proper importance before. Owing to the above-mentioned difficulties, a review of this work may best fulfil its aim by presenting the English reader with the following *conspectus* of its contents, that he may the better know what it affords and whereabouts the point on which he seeks counsel is likely to be treated.

I. THE VALUE OF EGYPTIAN ART. Egyptian is the only national art of which we can follow the undisturbed development from a very primitive period (yet not the very crudest), through a long history, to the full expression of the principles which guided it. This art is strangely different from that we practise, and it is therefore the more important to understand it, and to learn the inner meaning of the unfamiliar forms it assumes in low reliefs and pictures.

II. ITS GROWTH AND CHARACTER. Egyptian art acquired its strongly individual character once for all between the Second and Third Dynasties. It has very real beauties, for the nation possessed keen artistic gifts; but there are mistaken notions about its merits and demerits which we must not allow to prejudice us.

III. PAINTING AND RELIEF. Their relation, and the dominant value of outline.

IV. PERSPECTIVE. Even the simplest laws of perspective, though the basis of all modern draughtsmanship, are not observed by any nation before the Greeks; not because artists were ignorant of these effects, but because the changing forms of an object or a scene seemed to them to be false appearances, condemned by a knowledge of its normal aspect. This ancient view is apt at times to regain influence over nations that have fully accepted the use of perspective. On the other hand Egyptian art contains certain approaches to a recognition of visual phenomena.

V. ADVANCES BY THE EGYPTIANS IN THE ART OF DEPICTING SPATIAL RELATIONS BETWEEN OBJECTS AND THEIR PARTS. (1) The Egyptian procedure in regard to *flat objects*, lying practically in one plane. (2) *Simple objects of three dimensions*. These are generally shewn in their most characteristic view. (3) *Compound bodies*. These are generally shewn in a mentally reconstructed view as though in one plane,

but the various parts may be separately treated and the picture deftly built up, item by item, into an artificial composition. It is impossible, without other sources of knowledge, to retranspose these drawings accurately into the realities they represent. Yet we are comparatively rarely in doubt; for over large ranges of subject the forms were early fixed once for all, gaining semi-symbolic power. Even the opacity of objects may be disregarded by the Egyptian, so that his picture often resembles a sectional diagram, especially in the case of buildings. Despite these strange features, Egyptian art reaches a real reconciliation of true with imaginative representation, developing a genuine national style. (4) *Compound objects viewed in an indirect line of vision.* Even early drawings of flying birds sometimes assume an indirect (raking) view, in order to comprise more planes than one. But we cannot always say if this assumption is more than apparent: it certainly exists side by side with the simpler view-point and never led to a systematic change of method. (5) *Objects grouped in space.* In Egyptian pictures superposition or sequence of objects may, or may not, correspond to real relations of above and below, behind and before. The relation of bodies in depth of field can be shown only by overlapping figures, implying the adoption of a raking view from the side or from above. But we should never assume the conscious use of perspective when the picture can be explained on the ground of more primitive impulses. Still, there are reliable signs of groups having been seen in perspective (*échelon*) from a superior standpoint, and perhaps also of a complicated scene so viewed and depicted. Indications of speed (p. 115)—The use of a base line (p. 110)—No horizon used in primitive pictures (p. 137)—Coloured backgrounds—Mountainous backgrounds—Unity of view in complicated pictures is rarely adhered to, but there are devices which replace this—Some other deviations from nature in size and arrangement, due to mental preoccupations—The retention of outworn forms among the new—The inscriptions an integral part of the picture.

VI. THE STANDARD CONVENTION FOR THE HUMAN FIGURE IN EGYPTIAN ART, AND ITS RELATION TO NATURE. This conventional form is not a primitive survival, but a test of the significance and style of the national art. There is an early change from a front view of the trunk to a side view; for that such is the normal form is proved, *inter alia*, by the drawing of the body ornaments—The other parts of the body taken separately; head, neck, legs, feet, arms and hands—The drawing of the human figure thus follows, not a unity as seen, but a mental whole, built up of the several parts into a predominantly side view with a specially awkward point of union at the shoulders; for these are normally seen in a frontal aspect, surrendered or modified, however, under certain conditions (especially in the drawing of statuary). There was an advance towards a more exact rendering of nature in Egyptian art; hence in the Eighteenth Dynasty the drawing of the human figure *could* be interpreted as in a three-quarter aspect, and it is this approximation that reconciles us to it. The exclusive use either of side aspects or of frontal aspects is equally unacceptable to art: hence the merit of the Egyptian compromise.

Thus the book sets out to explain the value of Egyptian art to mankind (1) by pointing out its exceptional position in "pre-Greek" (primitive) art; art, that is, which, in using its privilege of presenting us with something other than the eye reveals, takes the drastic step of ignoring the third dimension on which the phenomena of perspective rest, or recognizes it only by a few conventional and evasive devices; (2) by setting forth the professional rules or customary procedure which this deliberate evasion entailed, and indicating the beauty and truth which are still possible under such conditions in regard to still life (simple or complicated), the human figure, and larger compositions; and (3) by pointing out the historic advances which took place, tending towards a more natural presentation, and how this development was checked and arrested by the invincible conservatism of Egypt. Every point is illustrated by a wealth of well-chosen examples; so that, as the argument proceeds, Egyptian art, which had attracted us by its quaintness alone, takes on a new content, and we watch with fascination the child-like artist wrestling with the difficulties of his task and eventually settling down to a very individual solution of that conflict which art feels between the claims of the senses and those of the soul. The efforts of the author to make intelligible to the layman the apparent vagaries and obsessions of Egyptian art, and to give them dignity as a part of the great mental struggle which the Greeks in part surmounted and in part left for ever insurmountable, reach a very large measure of success.

One of the greatest difficulties in writing books on Egyptian art is that so large a proportion of published scenes are inaccurate, incomplete, or mere travesties of the originals. Prof. Schaefer is well aware of the pitfalls, and is so conscientious in the use of documents that his arguments are never founded on such quicksands. The only, or almost the only, case in which he seems to have been betrayed by his copyist is a picture from the tomb of Huy (Fig. 60). I have had occasion this year to study the almost effaced

original, and have been forced to the conclusion that the decoration given by Lepsius's artist is completely erroneous, the original having probably shewn only lumps of incense or other material in a bowl of hide¹.

Prof. Schaefer lays stress on two precepts, and has given in his book many examples of his own self-discipline in obeying them. One is that each Egyptian picture has to be interpreted like a hieroglyph and has often several possible values, between which experience alone enables us to choose, and that not always with certainty. His own judgments are so admirable that I am inclined to submit a rival interpretation only in one or two instances. In Fig. 35 A I should prefer to see in the upper line, not a covering drawn over the body, but the soft mattress on which it rests and which is not indicated beneath it owing to the artist's preference for a straight base line. The other rule is (p. 126) that when we are tempted to judge a drawing as a nature study in the modern way, although it can be explained as a mental creation, we should always choose the latter alternative unless there are strong reasons to the contrary.

The great importance of a correct interpretation, and the subtle difficulties in its way, can be best shewn in a single example. The author has avoided the temptation to a "Greek" explanation a dozen times. But he has perhaps succumbed in a crucial instance when he claims (p. 98) that the setting of the wings in the body of certain flying birds can be based only on an observation of nature taken on a line of vision diagonal to the object. I do not think that this is so; for it would be a very subtle perception, difficult to receive and retain. The difference between Figs. 57 and 56 is only that the wing is made to spring from inside the rounded body instead of from the outline—an observation of nature that is often found in Egyptian scenes—and Fig. 58 only transfers this feature from one wing to the other. The improvement on the common way of drawing it is, to our eye, enormous; for it at once gives the appearance of diagonal flight towards or away from the observer. And I can well believe that the artist shared to some extent our delight at the spirited movement which he had by chance introduced into his picture. It is thus that the value of drawing in perspective must have been discovered. The difference of interpretation, however niggling it may seem, is vital. The picture so drawn is not a copy of natural flight or meant to indicate a particular direction of view or of movement; it is, like all the rest, a representation mentally reconstructed from known features of bird life, and its pleasing effect is mainly a happy accident.

While on the subject of the few points on which I am at issue with the author, I would add my emphatic dissent from the judgment (p. 138) that the lilac and deep yellow backgrounds of Egyptian scenes were chosen for the beauty of their colour effects. I am inclined rather to qualify both in most cases as detestable settings for the coloured figures, the former being tolerable only because time has generally toned it down and has often reduced it to a mere tint. There is very little evidence from Egyptian art that any serious attention was given to a colour scheme; flagrant violation of taste is more common. The selection of these colours must have a natural motive, and may reflect, the one either the background of the sky or of the parched fields in the plain, the other that of the deep-toned western desert. A word may also be added to the brief treatment of the full eye in the side-face (p. 177)—that rock of offence to the modern man. There is no special strangeness about it: it could not be drawn otherwise by a primitive draughtsman. But it does exhibit "pre-Greek" drawing at its utmost incompetence. We do not need to explain it by the high value placed on a healthy, complete eye without suspicion of a squint; for had man had but one priceless eye, like Enceladus, in the middle of his forehead, there is little doubt that in a profile only half of it would have been shewn, as with the mouth, the nipple, the toe-nail². As a third dimension did not exist for the artist, a rounded figure had to be treated as if it were a plane sheet without any rotundity. He dealt therefore even with the human figure when to be viewed in profile as if it were cut out of paper and folded down the middle. Features lying on the centre line were thus

¹ This is not the only instance in *Denkmäler*, III, Pl. 118, of the artist's over-confidence in his powers of interpretation and restoration. These copies of Lepsius are the foundation on which important conclusions are confidently based almost daily. It has long been recognized that their accuracy had limitations, but these are evidently more serious in certain cases than most of us have supposed, and it is very important that the regular procedure of Weidenbach and others of Lepsius's staff should be accurately ascertained from the original drawings in Berlin and made public. It is no light compliment to Prof. Schaefer, and yet one that he has eminently earned, to say that we could rely on him to do this international service. The great achievement of Lepsius not only can well afford to suffer some subtraction, but will be more valued when relieved of pretensions that have been attributed to it by us, rather than made for it by him.

² But never the navel, implying that the abdomen is slightly twisted to meet the similarly placed thighs, less with any idea of a raking view than in order to place the navel in its known relation to the fork.

halved, but the eye, being set some little distance from the centre, lay wholly in the plane which was in view, and was therefore drawn as if fully seen. The visual distortion of a form when on a swelling surface can never be acknowledged by a primitive artist¹; nevertheless one is startled to find the rule applied so unflinchingly to the human form.

Prof. Schaefer professes to deal only with certain aspects of Egyptian art, and dismisses the question of colour briefly (pp. 38—40). Yet, in its power of expressing depth of form by shadow, it is intimately bound up with the self-denying ordinances of pre-Greek art. With the exclusion of the third dimension the beautiful variations of colour which shadow involves must also be renounced. Was it fidelity to principle then, or lack of colour-sense, or technical difficulties that led to this sacrifice? Probably the first motive always had power enough to allow the other considerations to veto the use of shading. Egyptian art sacrificed itself in the main to an extraordinary enhancement of average performance. To remove this veto the heresy of a fixed point of view would have had to be admitted, and an infinite variety of forms, which could not be learnt by rule or even by the study of masterpieces, would have made the training of the mediocre craftsman immensely harder. In addition, the technical equipment of the Egyptian artist was opposed to such a development. With him the admixture of colours rarely went beyond an addition of white. Approximation to natural colour is often so rough, even in such all-important cases as flesh-tints, that it is evident that the ancient masters at any rate had almost renounced it, and that colour had early become a convention, almost a symbol. Colours were usually ready mixed on the palette, not on the surface by the brush, and indeed thick pigments, which dried almost immediately in that climate, were unadapted to smooth gradations.

That the Egyptian was aware of his shortcomings is clear, but his avoidance of a gamut of colour is not less so. Where the edge of the colour is obviously not sharp, as in the spots on the coat of an animal, he renders it by small serrations or streamers or fine spots, as a lithographer is obliged to do when his printings are limited. Thus the areola of the nipple is shewn by a blue disk (halved when in profile) with an outer circle of dots.

It is strange that the only attempt at shading comes in with the Nineteenth Dynasty; although I know no instance of it under Akhenaten, I think his artists must have introduced it, or at least have pointed the way. The inclination to indicate form within the outline had by this time greatly increased; for the ankle, the depression of the navel, the dimple of the mouth are now marked by a curving line. In one artist's work there is shading on chin, cheek and heel; but it is pretty clear that it is only the deepened colour that has been observed, and not its origin in form as a cast shadow. The latter can be predicated only in extreme cases, such as the black spot in the corner of the mouth and the nostril, which now appears, and soon becomes unpleasantly obtrusive.

The shadows on the pleated or crinkled dress, of which Schaefer speaks (p. 38), are a very real contribution to the beauty of the mural paintings. He is misleading for once in speaking of these folds as yellowish brown; that is only the degraded form. They are at first a delicate pink where they are supposed to represent a veiled flesh colour, and a very faint grey when the spreading folds become so soft that a rendering by even the faintest line has to be given up as too harsh, since the corrugations have become only a faint ripple of shade. The effect is beautifully delicate, and the curving convergence of the lines comes very near to a true indication of form by shading, though probably the deepening of colour was once more the salient impression. But if true shading has not been reached, the appreciation of delicate tones certainly has. It is characteristic of Egyptian art that this is reached, not by direct brushwork, but by painting the flesh and the shadow, and then reducing it by a veiling of white pigment. For the Egyptian was wont to draw, and sometimes even to paint, his figures nude, and then to proceed to clothe them, especially in the case of women. This helped him greatly in precision of form.

If the value of a book depends not merely on the knowledge it imparts but the thought and interest it educes, this work of Schaefer's is intensely helpful. I may be pardoned therefore if I give a brief sketch of the origin and methods of primitive art as it has shaped itself to my mind under his influence.

The task of Art, in the limited sphere with which Prof. Schaefer deals, is the translation of the manifold world displayed to the senses into outlined or coloured forms on a plane surface. To us moderns this seems essentially a simple thing, and we marvel only at the dexterity in execution shewn by the skilled

¹ Unless it be that marvellous drawing of the nude girl in three-quarter view from behind (Fig. 114), or, much less convincingly, the earlier achievement of Fig. 61. "Foreshortenings are necessarily foreign to Egyptian art" (p. 188).

artist. But to the child and to primitive man the very proposal must partake of the almost miraculous, until the first clumsy attempts by himself or others actually lie before him. Pictorial art, too, may seem to us an alien irruption into the life of primitive man, whose threatened existence claimed unceasing vigilance and kept all his mental equipment at the strain. We must conclude then that the origin of Art is due to a belief in its utility, though it seems to us the most idle of occupations, a luxury of the spirit. Prof. Schaefer's repeated comparison of the delineator's art with writing may help us to the truth. The invention of drawing, like that of script (its later and cursive form), meant the acquirement of telepathic influence—the exertion of will at a distance, whether that distance were a mundane one or reached out into a more mysterious realm where the gods dwell. It was a form of extended, unlimited, power. The spoken word is an expression and indication of volition, and the written word sends it beyond the immediate physical reach of the determining will. And as the word aims primarily at producing desired action, so the artist is from the first creative. By depicting objects, animals, persons, certain interactions of persons, animals and things, he hopes to bring them into real being. Hence to the Egyptian he was a "creator" (*šꜥnꜥ*), one who "brought to life," whether he engaged his powers on a statue or on the leg of a chair. The primitive artist was no idler, indulging a vagrant fancy, nor a superman of his time, giving play to emotions that transcended earthly needs. Art to him was less recreation than re-creation. He was seeking to exert power more widely and with greater cunning than his fellows. And if the mental attitude and the emotional equipment proper to art were already involved in his attempt, they were by-products at first and for long after. This stage may already have been left far behind by the earliest Egyptian art known to us, but we are continually made aware of the embryonic form which underlies its strange phenomena and its most mature developments. This thought, that the great struggle of mankind with his material environment, and his consequent entanglement in hopes and fears, is reflected and inwoven in all that seems most detached from that struggle, fanciful, luxurious, cultured, aspiring, gives a new dignity and meaning to ancient art, unless, indeed, we are ashamed and frightened at the irremovable fetters which bind us to this material world.

This creative impulse conditions primitive man's mode of drawing. For his aim is not merely the deft transference of a world of three dimensions to a plane surface. He would have learnt no doubt in time how to do that more or less well, had he felt urged towards it; for nature had already done it for him on the retina of his eye, and a picture in perspective is only the transference of this to paper or what not, as the Greeks knew, though not as a scientific fact. But he aimed at creation; therefore at putting down more than the eye shewed at one moment or in one aspect. Form and colour changed with every movement of the eye, the scene shifted with every moment of action; but he sought to depict the true object in its fullness and truth, the action complete and free from entanglement. He could not realize how the experienced mind supplements, corrects, interprets, what the senses deliver to it and grasps in the action of the moment those in which it began and will end, or that the limitations of the perspectival view, though real, are far less serious and misleading than the symbolic picture which hopes to transcend nature.

This attitude towards perspective—visual truth—is crucial, and it may be well to study it more intimately. Prof. Schaefer rightly lays stress on the fact that the "pre-Greek" artist saw what we see, knew that objects changed their apparent form as they moved before the eye, or as the eye adopted a new point of view, and yet chose to ignore them. But this does not lead us to any real conclusion, nor must we conceive the renunciation as in any way deliberate or reasoned, or as altogether unconnected with the difficulties involved in drawing things as seen from a fixed point of view as compared with the attempt to portray them as generally or most directly seen. We do not need to become as children to understand this. Those who have no gift of drawing and no training in perspective can gain some real conception of the instincts of the primitive artist. No human being can be without knowledge of perspective; the whole point is how far this knowledge is conscious and reflected in his mental pictures. The Egyptian artist has shewn such magnificent boldness and patient labour in his creations that we can never accuse him of shirking a method he saw to be the true or superior one. The indolence (if we can call it such) is that of the memory, which instinctively chooses the easier path and economically stores up visions (note the word) of objects seen from a point of view which gave them their most characteristic outline, or dissects away their various parts and planes. So also, in regard to scenes where objects are superimposed and living beings interact, memory mechanically retains pictures in which the interference of one object with another to the eye is at its minimum, and the complex action is sorted out into episodes as simple and direct as possible.

No doubt the picturing memory can be trained, and in advanced races is capable of retaining a greater number of pictures, and those more complicated, than that of primitive man; just as a film camera driven at greater speed takes more impressions with truer results and less awkward hiatuses. But memorized vision is not enough. Though primitive drawing comes nearest to a direct copy of first impressions, the re-transference of these to the material world from which they came, but with one dimension subtracted, involves, or gives an opportunity for, thought; to say nothing of the artistic gift which appreciates rhythm and harmony of form and all that contributes to what we call beauty.

In one sense we might say that to draw in perspective should be the natural and instinctive method, since it only reproduces the picture which is on the retina. We might expect it to be this that would be memorized and would guide the fingers of the artist, as the corrugations of the gramophone record induce the needle point to re-transform shape into sound. And perhaps this is so as soon as the artist desires intensely to reproduce nature *as seen*, that is as seen at a chosen point and moment, and finds in the vast repertory of his up-to-date memory the complicated picture he demands. But, as I have suggested, this is neither the natural equipment nor the need of the primitive artist. As to his equipment, the primitive memory has had to economize its library of records according to its powers and storage-room, and has found room only for the most characteristic and simplest aspects of the kaleidoscopic world. As to his need, he desires the box, the man, not as seen from this angle or from that, but the essential box or man; for his creative purpose is to call up by his picture the thing, the event, in normal and many-sided being.

As every man is, or used to be, born a little Liberal or a little Conservative, so each man is naturally a nominalist or a realist (our author rightly lays stress on the connection between the philosophic thought and art of the Greeks). Early man is a nominalist, though on a low plane. He desires the general, the typical; and what he wants he finds. In so doing he becomes a decorative and symbolic painter, a skilled maker of silhouettes in polychrome, a caricaturist, seizing with unerring instinct what is essential, salient, characteristic. His drawing, like his script, is hieroglyphic—a pictograph, that is, as far as may be, but, for the rest, conventional and going beyond sense, as writing must, since spirit cannot be fully expressed in terms of matter.

One can imagine that visual memory and primitive art had reflex influences on one another. Man, interested in things as they are and in detached occurrences, was apt to see them as he desired. His memory naturally eliminated what was unessential and confusing, and he learnt in part to see them as he has drawn them for us, the picture being disintegrated instinctively and thus stored in memory for use. So far he did not see as we see, but rather as our children see, or remember to have seen, and as the thoughtless still see after their grades, committing to paper or some other surface what they see inwardly. But to this he also added new influences of more deliberate thought. We can scarcely think, though to a small extent it may be true, that he saw his master twice the size of his fellow-servants, or that his mental vision set out a picture of a pastoral scene into neat rows, the animals and accessories round a central figure falling to right or left or above him, and standing clear without being overlapped the one by the other; or again, that he never saw a figure coming directly toward him out of the background or moving diagonally, so as to appear in full or three-quarter view. Here we have to do with a deliberate arrangement, in which he used the remembered parts of an object or scene as materials to be recomposed, a theme to be set in a different key, or worked into a new variation. No doubt indolence played its part here. It was pleasant to decide that the fatiguing effort of seizing and retaining the exact aspect of a figure or scene from a chosen point of view was also undesirable, since fidelity to nature was not his first nor his second impulse. On the other hand he would be glad sometimes, when he had reached a solution of the problem set him by the respective claims of several memory pictures, their necessary combination with others, the avoidance of complexity and misconception, etc., to find that the non-natural picture so resulting came very near to nature after all, and was as true as it was informative. These cases are those which seem to us—generally, if not always, erroneously—to carry proof of the artist's conscious use of perspective. But the sacrifice of complete fidelity to visual perception by the artist was by no means always deliberate and reasoned. He might often have drawn certain parts in perspective and with enormous gain, since nothing wrongly drawn can ever in itself enhance a drawing. No one but must rejoice to see the nearer foot of the human figure furnished, towards the end of the Eighteenth Dynasty, with its proper complement of toes, rightly drawn *en échelon*. But very speedily certain modes of drawing the various features of the very limited repertory of scenes had acquired fixed currency. Being conventional, not natural, their significance was as settled as that of words in a dictionary, and to draw them otherwise in a serious work was as

repellent to the educated as phonetic American spelling is repellent to the cultured, or ridiculous to the uncultured, Englishman. Only now and then might an artist be allowed a breach of custom, as a writer of power is permitted to use a word in a new sense or coin one, and even secure its permanent adoption.

Such novelties had in Egypt little permanence. Though, as the primitive aim of creating a world by representation of it, of dominating destiny by picture, lost force, and the desire of truth and beauty for their own sakes, or the wish to mitigate the unsightly junction between thought and sense, increased, a growing fidelity to the world as it is seen became manifest in the art of Egypt, yet the new mode was always liable to an atavistic return to the old type. The nation was prone in hours of humiliation to fall back on its pride in the past as on a stimulant. Having committed itself to a mode of pictorial narrative, built up of elements derived from nature but cemented by thought into a whole whose lines of junction often seem strange to us, and having settled down with marvellous rapidity of decision to stylistic rules which were practically inviolable in essentials, Egyptian art did not easily admit improvements which were inconsistent with its basal principle. And it is perhaps well that the cultured form of primitive art which it presents kept its ancient fashions intact to the end, and died of old age just as its gifted pupils from the north began to produce new forms of untrammelled beauty.

Professor Schaefer calls on us more than once to detach ourselves from the modern naturalistic mode of drawing which the Greeks taught us, although we can never be in doubt of its superiority, and to dwell on the gifts which the primitives brought to the solution of their problem, the success they achieved, the beauty which conquered even such limitations, the decorative power which this world of two dimensions disclosed and its lessons in the free treatment of the world of sense. We must completely lose all sense of irritation at unwonted conventions and be able to admire a national art, though it ignores depth of field, abandons foregrounds, eliminates shadows and gradations of colour, restricts itself to profiles, renounces facial expression, likes to confine its grouping to rows and processions of figures moving straight across the field and to avoid intersecting lines and figures, and trains itself in an exact imitation of the designs and technique of the ancestors. We may regret the failure of the real advances made towards naturalism. But the grafting of the new on the old would have been as difficult as the composition of a language out of agglutinative and Aryan stocks; and only patchwork could have been reached by a nation which did not know how to forget (to use Erman's happy phrase). The general use of perspective would have meant a revolution of form, and a complete change in the end sought by its art. For despite its instinctive, unhesitating imposition of a mental form on the material world, Egyptian art was essentially materialistic. The Kingdom of Heaven which it sought was wholly of this world. It hoped that thought which was founded on material things could create them again at will. Whereas the Greek, copying the world as he sees it in a given situation and moment, or as he might have seen it, is none the less spiritual. He employs thought, not merely in selective functions or for cobbling together what is left of a world whose foundations in space and time have been broken up, but in subtler and nobler ways. In accepting nature he transcends it, and uses thought to secure the selection of the scene, the nobility of the fancy, the harmony of the parts, the rhythm of the composition, the emotional value of the whole. The Egyptian and the Greek are poles asunder, but both created classic types, the one no less than the other. And as for our powers of appreciating both, our author has shewn us that, if we are Greeks by tradition and education, we are pre-Greek by birth.

This is a war book, and though it was vastly better to print it thus than not at all, it seems to me that the publishers would have been well advised to have saved the price of a decent paper by binding the book in one volume. The use of two, one containing the text, the other the notes, indices, and plates, I personally find exasperating. But one must commend the sagacity of providing adequate and abundant illustrations at all costs. Pictures are as vital to books on Egypt as similes to poetry or action to a drama.

N. DE G. DAVIES.

Short Egyptian Grammar. By Professor Dr GÜNTHER ROEDER. *Translated from the German by the Rev. SAMUEL A. B. MERCER, Ph.D. (Munich), D.D.* New Haven: Yale University Press. London, Humphrey Milford, Oxford University Press, 1920. Small 8vo. Pp. 88 + *56.

In the absence of any large and up-to-date Egyptian grammar in the English language, Prof. Mercer's translation of Prof. Roeder's concise treatise is most welcome, and will in particular be a boon to all English and American elementary students who are unable to read German. To point out the many good

features of Roeder's little work, or to criticize those statements with which we are now no longer in agreement, would be out of place here, the more so as the German original appeared some nine years ago. Dr Mercer, who has brought the bibliographical section up to date, has produced a translation with which little fault need be found (apart from the misprints, some of which might bother a beginner), and may be congratulated on a very useful piece of work. His use of *y* throughout for the "reed" may be regarded as unfortunate, but not more so than the *j* of the original; in the present state of our knowledge of Egyptian phonology the non-committal *i* is certainly to be preferred.

BATTISCOMBE GUNN.

Short Texts from Coptic Ostraca and Papyri. Edited and indexed by W. E. CRUM. Oxford University Press, Humphry Milford, 1921. 4to. Pp. xii + 149 lithographed.

This volume of *Short Coptic Texts* forms a companion to the volume of *Coptic Ostraca* published by Mr Crum in 1902. It differs from the latter in that it contains short papyri as well as ostraca. The papyri number some 50 out of a total of 450 texts, and are from the collections of the Louvre, the British Museum, the Rylands Library and the Philipps Library at Cheltenham. Mr Crum shows that some in the last-named were once in the Louvre, where they formed part of the Pesynthian correspondence published by Revillout, and came into the Philipps Collection as a result of the Libri depredations; and he has ingeniously pieced together fragments from the two collections which complete each other and must have been cut in two when the Philipps portions were abstracted.

The new ostraca are of much the same character as the earlier ones; but in the case of documents so often incomplete, so difficult of interpretation and so different from the longer and more formal legal documents, it is impossible to have too many of them. It is only by being able to deal with them in groups for comparison that we can arrive at any understanding of them. The majority of these pieces are assigned by the Editor to the sixth to eighth centuries; probably most of them are earlier than the Arab Conquest; a few only bear signs of being later. All but a very few were written at Thebes. Mr Crum in his preface lays most stress on their importance for philological purposes, and they will prove of great value to the grammarian and lexicographer. That however is an aspect of them which cannot be discussed in a short notice; but they also afford much information on the social and economic conditions of the country. For example, in the *Coptic Ostraca* there was a group of nine pieces all containing the mysterious phrase, "Lo, here is the word of God to thee"; about a dozen more have been published in various places in the intervening years, and now we have here 11 more. By comparison we now see that these are documents addressed by some one in an official position to a fugitive taxpayer who is adjured to return to his civic duties under a solemn promise that he shall not be prosecuted nor be made to pay arrears. These may be all placed in the Byzantine period, when, as we know from other sources, the burden of taxation was so heavy that many people, though prohibited by law from changing their domicile, ran away and hid from the tax-collector. Partly as a result of the deplorable financial condition of the country, guarantees played a large part in the legal system of Byzantine Egypt. Prof. Sethe has recently published a very full Coptic list of such documents in his and Patsch's work on Demotic Guarantees (1921) and these *Short Texts* include half-a-dozen fresh examples.

Interesting information as to agriculture and the land system is afforded by the forms of "authority to sow," i.e., instructions given by heads of monasteries to their tenants as to the nature of the crops they have to raise. These instructions seem to have been issued usually in Paophi, shortly before the inundation, and would therefore relate to fields which, while free from flood, would be brought within reach of irrigation during the high Nile. Such are one or two of the subjects on which information is afforded by these documents, and we should be glad of many more such collections. Singly, ostraca are of little use; in the mass they throw much light on contemporary conditions.

Unfortunately this volume gives us only the bare texts, with, however, a full and valuable index. Mr Crum holds out hope of a volume of translations later on. Let us hope it will include a store of valuable notes such as he gave us in his former volume.

HERBERT THOMPSON.

Studien zu den koptischen Rechtsurkunden aus Oberägypten. By ARTUR STEINWENTER. (*Studien zur Paläographie und Papyruskunde*, edited by Dr CARL WESSELY, XIX.) Leipzig: Verlag Haessel, 1920. Pp. ii + 79.

The Coptic papyri, though often enough used by students of the ecclesiastical history of Egypt, have hitherto been neglected by jurists and even, to a considerable extent, by the general historian. This neglect

is no doubt explicable; for not only do the Coptic documents, at least after the Arab conquest, form, juristically, a sort of backwater (since the law they embody was merely a survival from Byzantine times, not a link in a chain of development), but few jurists have hitherto possessed the linguistic knowledge without which work at such records is precarious. Lately, however, attention has, by several scholars, been called to the Coptic texts. They are not only of value intrinsically for the light they throw on the life of the Coptic population of Egypt but may, used with caution, serve to elucidate, retrospectively, the legal practice of Egypt even before the Arab conquest.

The present volume, therefore, by a jurist of recognized standing, is deserving of a hearty welcome. It is not an extensive work and it bears only to a limited extent on the law in force among the Coptic population of Arab Egypt; but it is of considerable value as a contribution to the study of the local administration under the Arabs. The author, feeling that the study of the legal institutions of this period could not profitably be undertaken till the administrative system within which these institutions must operate had been elucidated, has devoted himself in the first instance to this task; and the present volume is, in fact, in the nature of prolegomena to his real subject, the study of the law revealed by the Coptic papyri. When, or whether, in the present condition of Austria, it will be possible for him to continue his work, is unfortunately doubtful; but certainly it is much to be desired that circumstances will permit of his completing his scheme.

This volume is devoted almost entirely to the Arab period and is based in the main on the Aphrodito texts in *P. Lond.* iv and on the Jême papyri edited by Crum, particularly the latter. A large part of it deals with the position and functions, more especially in relation to legal practice, of the local officials, from the *dux* to the *lathane*. The author has occasion, in discussing these questions, to deal repeatedly with the *διαλέξεις* of which so many survive among the Coptic papyri, but a fuller discussion of them, from the strictly legal point of view, will find its appropriate place in his projected later work. In the last section, in which he discusses the position and functions of the *νομικός* and *επιγραφεύς*, he investigates certain questions of diplomatic affecting the Coptic documents.

The evidence of these papyri is often very ambiguous and is, at the best, incomplete, so that on many points certainty is hardly attainable, and it is therefore not to be wondered at if not all the author's conclusions will be generally accepted; but he treats all questions with acumen and thoroughness, and has certainly made a valuable contribution to our knowledge of the subject. A few notes on single points may be added.

Steinwenter rightly points out (p. 2) that the Coptic nationality of most of the notaries who wrote the Greek documents of the late Byzantine period has an important bearing on the observed characteristics of the Coptic documents, which were bound, in the circumstances, to be based on Greek formularies. An interesting illustration of this fact is to be found in the case of Dioscorus of Aphrodito, who wrote both Greek and Coptic contracts (for a Coptic document by him see *P. Lond.* v. 1709).

On p. 8, note 3 Steinwenter attributes to me the opinion that the title *dux* in *P. Kl. Form.* 1314 and *P. Führer* 588 is an error. This is a mistake; my suggestion (*P. Lond.* iv. xix²) was that "it is possible that the description of [Atias] as pagarch is an error." Nor is he correct in understanding me to hold that under the Arabs the *παῖς* was exempted from the authority of the pagarch; my purpose in the passage to which he refers was to establish the fact that the pagarchy was, in most cases, more or less equivalent to the area of the old nome and that the *παῖς*-name stands for the pagarchy as a whole.

Steinwenter discusses (pp. 11–16) the question whether the pagarch had regular powers of jurisdiction in legal cases or was, in cases where he appears as judge, merely the delegate of the governor. He decides in favour of the first alternative; but it must be confessed that, although some of his arguments have weight, his conclusion is by no means certain, and perhaps the second view is the one less open to objection.

To the part played by the village *τέκτων* in a *διάλεξις* (p. 21 and note 2) a parallel, additional to those cited by Steinwenter, is found in *P. Lond.* v. 1708, 188, where *οικοδόμοι* occur in a similar rôle.

Steinwenter's statement on p. 64 that "in der byzantinischen Epoche wird der Vertragskörper, das *σῶμα*, nicht vom Urkundenverfasser...eigenhändig geschrieben, sondern durch einen seiner Schreiber" and that if, exceptionally, the notary does write the document himself he makes special mention of the fact in his subscription, is far too sweeping. It was common enough for the document to be written by a subordinate clerk, the notary or other responsible person merely certifying it by his subscription; but it is hardly safe to describe this as the rule. The fact is that a special type of script was usually employed for subscriptions, as for the dockets on the verso of rolls, and superficial dissimilarity of hand cannot be taken

as proof of the presence of different writers. The whole question is very difficult, as it is often by no means easy to distinguish hands, and in many editions insufficient care has been exercised in noting changes of hand; so that it is dangerous to make general statements on either side. Many existing ascriptions require to be tested before they can be relied on as evidence. As examples of what I have said above concerning the use of a special script for subscriptions I may cite *P. Lond.* v. 1662, where not only the colour of the ink and the forms of the letters but the actual wording of the subscription indicate that the subscribing γρομμάρειος wrote the body of the document and yet the subscription is written in a sloping, that of the document in an upright, hand; or *P. Lond.* 1716, where document and subscription alike are in the quite unmistakable hand of Dioscorus but the subscription is in a script of entirely different type from that of the document.

H. I. BELL.

Erbrechtliche Untersuchungen auf Grund der gräco-ägyptischen Papyrusurkunden. By HANS KRELLER. Leipzig and Berlin: B. G. Teubner, 1919. 8vo. Pp. xii+427.

There is in the Greek papyri a good deal of material illustrating the law and practice of inheritance in Graeco-Roman Egypt. Actual wills, indeed, though absolutely they are fairly numerous, are very unevenly distributed in respect both of locality and period, so that it is impossible to trace with any completeness the history and extension of testamentary formulae; but apart from these, there is in documents of other kinds much evidence for the law of succession. Moreover, in this sphere even more than usual it is of interest to trace the interaction of three distinct (and, in some points, very diverse) systems of law, the Egyptian, the Greek, and the Roman. It is, then, a field of study at once attractive and fruitful that Dr Kreller has set himself in this monograph; and though in a study like papyrology, which is constantly being transformed by the discovery of new material, finality is impossible, it may truly be said that his volume is exhaustive so far as the already available evidence is concerned, and is likely for long to remain the standard authority on its subject.

It would no doubt be possible, at least to some extent, to treat separately the three streams of legal theory and practice whose confluence produced the law of Graeco-Roman Egypt; but it is certainly more profitable to start, as Kreller does, with the complex system revealed in the papyri, and to discuss the elements combined in it as occasion demands. The Egyptian law, embodied for the most part in documents written in the native language, can be treated by those ignorant of that language only at second-hand, and its influence is in any case less direct and more indefinite than those of Greece and Rome. Between these latter there is a striking difference. The Greek law of inheritance has to be ascertained, not directly from codes or single enactments or from legal commentaries, but by inference from the orators, or, in the case of our Hellenistic law, from the papyrus documents; for the Roman law, on the other hand, we have adequate authorities in the juristic literature, and the function of the papyri is, in the main, merely to illustrate the working of the law in detail and to reveal the extent to which the theory was modified in practice by the influence of local custom.

Kreller begins his book with a chapter on the subject of inheritance, including both the assets and the liabilities. On the latter the main subject of discussion is the vexed question to what extent the heirs were responsible for them. Here he decides that no definite conclusion is at present possible, and he very sensibly remarks (p. 47) that this may well be due to the fact "dass das juristische Denken des griechischen Volkes die Frage nach dem Umfange der Haftung überhaupt noch nicht scharf erfasst hatte." In the second chapter he deals with the persons concerned in the inheritance, beginning with a discussion of terminology. The chief problem here centres round the words κληρονόμος, διάδοχος, and διακάτοχος; and he rightly points out (p. 61) that, while definite technical meanings can be distinguished at an earlier period, the Byzantine notaries used the terms with little or no consciousness of any difference; papyrologists have sometimes been too ready to seek in the verbal jungle of Byzantine documents a precision which was quite foreign to the Byzantine mentality. In connexion with Kreller's note on the word κληρονόμος on p. 62 reference may be made to *P. Lond.* v. 1733, 35, which furnishes more definite evidence as to its nature than was previously available.

Chapter III deals with the heir's position in law, in connexion with which Kreller gives (pp. 108-110) a list of returns of property acquired by inheritance, chapter IV with the order of succession among the possible heirs. Here Kreller deals at some length with the preference frequently given to the eldest son, in accordance with old Egyptian custom. On the other hand an equal division among all the children is not

uncommon, as in *P. Lond.* v, 1727; an even better instance is *P. Lond.* v, 1709, for in that case we know that the single son and the two daughters each received a third.

Chapter v deals with the actual disposition in wills, as recoverable from the papyrus documents, and includes a very useful table of known wills. *À propos* of Kreller's remarks on the various forms of "elterliche Teilung," of which, on p. 238, he gives a list, it must be pointed out, as against what he says on p. 239 (b) that the example in *P. Lond.* 1727 has, in a somewhat elaborate form, the introductory formulae (νοούμενος φρονοῦντες κ.τ.λ.) usual in a will; and indeed San Nicolò (*Zeitschr. f. vergl. Rechtsw.*, xxxix, 290 foll.) takes it as a "gemeinschaftliches korrespektives Testament."

On p. 315 Kreller remarks that the written form of will was essential in Egypt, adding "wenigstens ist von mündlichen Testamenten in den Papyri nirgends die Rede." This is no longer true; *P. Lond.* v, 1709 mentions an unwritten will (ἐξ ἀγράφου βουλήσεως, l. 28), and there is no question of its legality; on the contrary it is the whole basis of the plaintiff's claim in that document. Another statement which perhaps, but less certainly, requires correction in the light of later evidence is that on p. 335, note 32, that of the *testamentum apud acta conditum* "ist uns in den Papyri nichts erhalten." Part xvi of the *Oxyrhynchus Papyri* will contain a document which very likely refers to the *insinuatio apud acta* of a will; but unfortunately the interpretation of the passage is doubtful, and it is not even certain that the document referred to is a will at all.

At the end of this long chapter v, Kreller deals with the custody and the opening of wills. Finally he gives a number of Addenda, chiefly on documents published too late for notice in the body of the work; and these are followed by good indices.

The work is far more than a mere compilation of the material available; it is a substantial addition to knowledge, and author and publisher alike deserve hearty congratulations on its publication (not indeed its composition, which was in the main completed by 1913) so soon after the conclusion of the war and in the face of so many difficulties.

H. I. BELL.

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¹ We are indebted to Miss M. C. Jonas for this Index.—ED.

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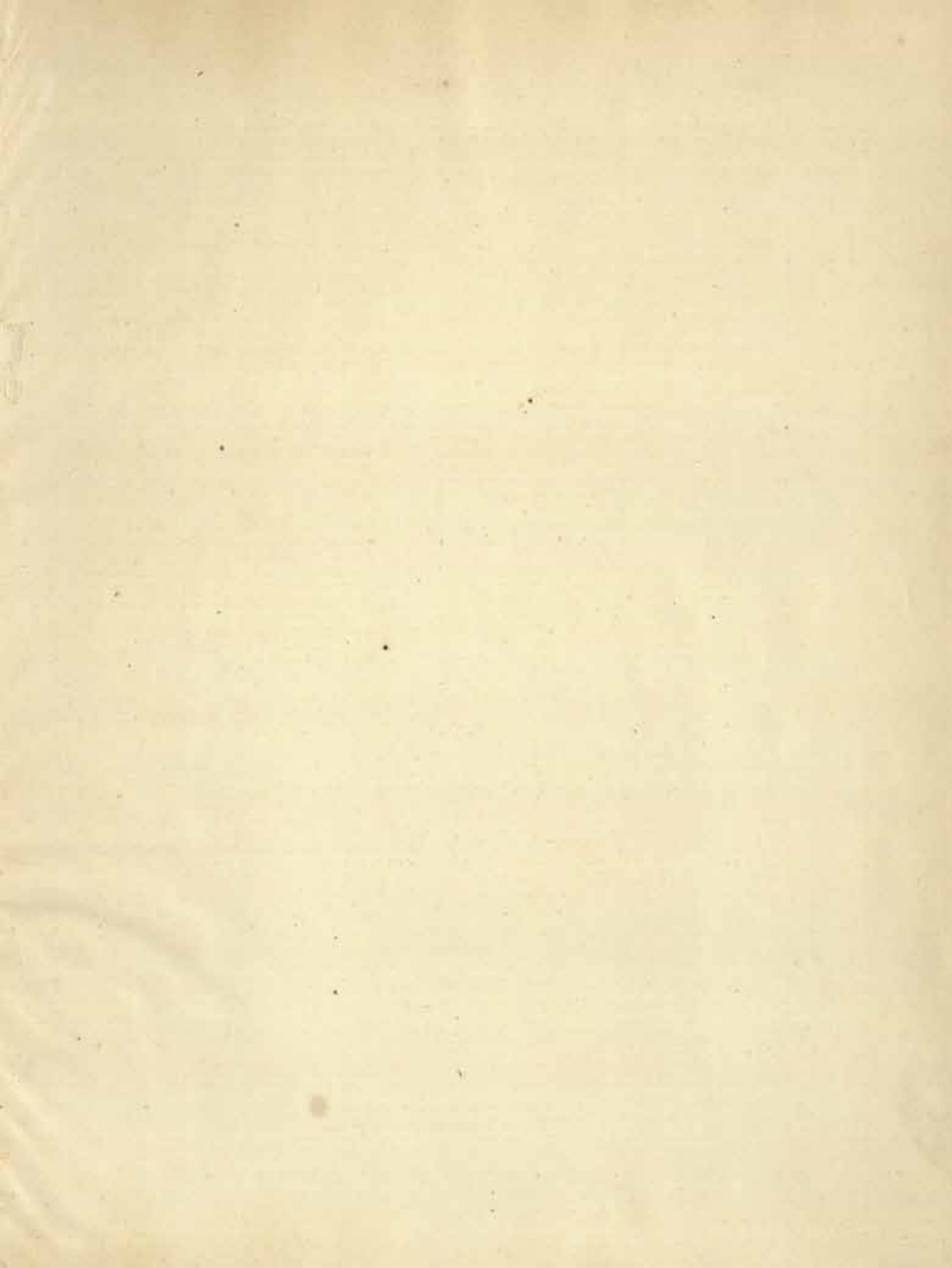
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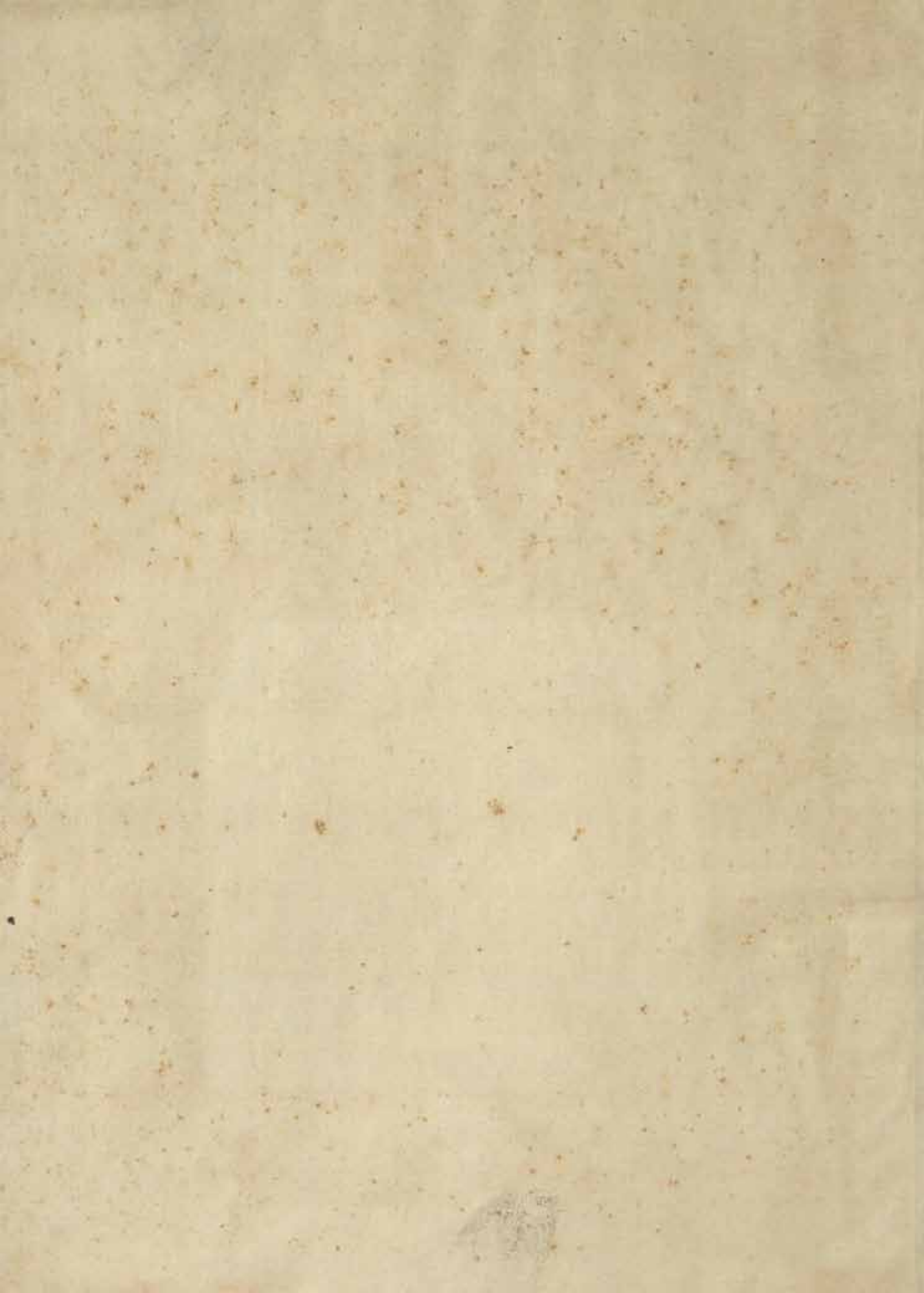
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